Uganda Human Development Report 2007

Rediscovering Agriculture for Human Development

United Nations Development Programme

PREFACE

Uganda Human Development Report 2007, is the seventh in a series on the country. The report looks at issues that profoundly influence the level and status of human development. The report is the outcome of a wide participatory and consultative process that involved government ministries, Uganda Bureau of Statistics, academia, development partners and the civil society. Agricultural development, which is the main focus of this report, has a direct bearing on human development through the provision of basic food for the population as well as the required raw materials for industrialisation. The sector is fundamental to Uganda's development and the report argues that with over 70 per cent of the country's population engaged in the sector, coupled with 42 per cent of the rural population living below the poverty line, promotion of agriculture and rural development would directly benefit the poor and reduce mass poverty.

The theme of this report, published with the assistance of the United Nations Development Programme, is 'Rediscovering Agriculture for Human Development'. Previous reports have argued that development is about expanding choices so that people can have full and creative lives. This report, which is an outcome of research and analysis by national experts and staff within the UN system, is intended to stimulate debate and dialogue around a set of issues that will have a profound stance on progress towards achieving the Millennium Development Goals and human development in Uganda.

While Uganda's policy makers are increasingly putting emphasis on the transformation of the economy, it is becoming clearer that the mainstay of Uganda's economy ought to be strengthened in order to attain the desired transformation. People have to have food security and the various agricultural institutions strengthened to provide adequate services to the rural population. These must be backed and supported by a more comprehensive national agricultural policy.

For this reason, the report emphasises the need for supporting favourable agricultural conditions, namely inputs, infrastructure, research and extension services as well as affordable credit for smallholder and medium scale farmers. It is argued that this will have a positive impact on the quality of life of the majority population who reside in the rural areas. Indeed, the contribution of agriculture to the economy of Uganda in supporting rural livelihoods is unquestioned.

The report seeks to analyse some of the salient features of agriculture and rural development in the country, and concludes that one of the root causes of rural poverty is women's lack of control over productive resources. The importance of land as a fundamental asset for agricultural and rural development is equally highlighted in the Report.

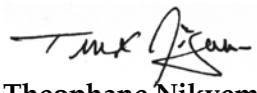
Furthermore, the report expresses considerable hope that with the conflict in northern Uganda coming to an end, agriculture offers an opportunity for a quicker reconstruction, recovery and sustainable human development. It also cautions that the recent discovery of petroleum resources, though has the potential to positively influence human development, should not be allowed to overshadow the fundamental role of agriculture in significantly contributing to the country's development agenda.

While articulating the extent of the relationship between agriculture and human development, the report shows that Uganda has made progress in human development. The Human Development Index (HDI) for 2005/6 was 0.581 compared to 0.488 in 2003. This confirms the earlier assertion in the Global Human Development Report published by UNDP New York that Uganda has moved into the group of medium human development countries. The significance of the progress to date is clearly seen in the improvement of economic growth and life expectancy.

With respect to regional levels of human development, as in the past, the central region had the highest HDI of 0.650, followed by the eastern region with an index of 0.586 while the western region registered 0.564. On the basis of the available data on the Northern region, the HDI was 0.478. These figures indicate that the serious socio-economic problems in the north continue to keep it from moving into the medium human development group. The report also shows a clear urban-rural divide. While there appears to be consistent progress at both fronts, a persistent gap between the rural and urban areas in terms of human development continues to exist.

The challenges confronting agriculture and its impact on human development are many. Recent concern about climatic change has brought the matter to the fore. Its impact on agriculture can be enormous, and climatic change is currently seen as the defining human development challenge of the 21st Century. The response to this challenge is crucial to efforts toward poverty reduction.

In conclusion, given the pervasive nature of agriculture on virtually all aspects of human development and livelihood, it is imperative that a concerted effort is made to use it to stimulate debate and dialogue around a set of issues which could have a profound bearing on human development. I trust that this will have significant influence on both the policy makers and practitioners.



Theophane Nikyema
UNDP Resident Representative/
UN Resident Coordinator

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This report has been prepared with substantial and generous contributions of many individuals and organisations. We are grateful for their assistance. As a result of the assistance they provided, the report adequately meets most of the guiding principles established by UNDP for National Human Development Reports, namely, national ownership, participatory and inclusive preparation, independence of analysis, quality of analysis, flexibility in presentation as well as a process of sustained follow-up.

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The overall responsibility of the report rested with the Report Team within the Policy and Strategy Unit of the UNDP Country Office which guided the work of the consultants by providing substantive and invaluable inputs through frequent discussions and assessment of all drafts. Alexander Aboagye, the Economic Adviser of the Country Office coordinated and directed the preparation of the report. He was assisted by Johnson Nkuuhe, Diana Sekaggya, Regina Akello, and Faith Karyarugookwe provided critical administrative support and management services.

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Executive Summary

Uganda at a Glance:

Uganda is a land-locked country occupying 241551 sq. km., 18% of which consists of open inland waters and permanent wetlands. It is closely linked by economic and colonial history to her neighbours: Kenya, Tanzania, Sudan, Democratic Republic of Congo (DRC), Rwanda and Burundi. There are cross-border ethnic linkages with nearly all the neighboring countries, a fact of economic and socio-political significance for Uganda in the region.

Uganda's population has been doubling almost every 20 years: from 5 million in 1948 to 9.5 million in 1969; and from 12.6 million in 1980 to 24.2 million in 2002. The mid 2007 population projection stood at 28.2 million; (2002 Census) of which 87 per cent live in rural areas and 73 per cent are engaged in agriculture. With its population growing at the rate of 3.2 per cent per annum, Uganda has one of the highest population growth rates in the world, higher than the Sub-Saharan Africa (SSA) average of 2.4 per cent. The high population growth rate is attributed to a high fertility rate, low prevalence of family planning methods, young marriage age for women (18 years of age on average), and the high influx of refugees. According to the recent Demographic and Health Survey (2006), the fertility rate for rural Ugandan women is 7.1 while for urban women is 4.4.

With a real per capita income of US$ 334 in 2005, Uganda has made considerable progress in poverty reduction; from an income poverty of 56 per cent in 1992 to 31 per cent in 2005. However, in-spite of the considerable efforts to transform the economy, and considering the substantive gains recorded in economic growth over the last decade, the overall welfare of the farmers and the rural population has not correspondingly registered a substantial improvement. While the modern sectors, including services sector, commercial agriculture, and real estate, among others, have positively responded to the macro-economic policy stimuli, the small-holder farmers have not equally responded to the same stimuli. This challenge is compounded in the north and north-east by insecurity where the sub-regions' economic potentials have been stifled.

Eradicating poverty and attaining rapid, equitable and sustained economic development for social transformation remain Uganda's major challenges to the achievement of MDGs. In this respect, Uganda has made progress in reducing income poverty and HIV/AIDS prevalence as well as increasing school enrollment, access to safe water and gender parity. Areas of slow progress include combating infant, under-five and maternal mortality; reducing malaria; improving environmental sanitation and living standards in the slums; and reversing the loss of environmental resources, such as wood fuel sources, change in rainfall regime, lack of soil erosion control, and other related environmental services.

Uganda has a multi-party political system of governance and a relatively vibrant civil society, the media and freedom of association and speech. Furthermore, government has implemented several affirmative actions that have empowered women and the girl child.

Being land-locked, Uganda faces many challenges of access to international markets. Major

international and regional trade exports and imports involve long overhauls through third countries to and fro distant seaports. For good access to regional and international markets, both rail and air transport are particularly and potentially important for Uganda; so are waterways, especially for regional connections and development. The infrastructure necessary to efficiently support these linkages is presently not well developed.

Uganda's capacity to exploit the economic potential accorded by its central position in the Great Lakes Region is not being fully exploited. For instance, Uganda produces substantial quantities of perishable food (banana/matooke, cassava, sweet potatoes, Irish potatoes, fish, meat, fruits and vegetables etc.) and which cannot therefore withstand transportation over long distances, across the regions. This has had a restraining effect on both agricultural production and marketing, especially of agricultural products, which are marketed in bulk.

Agriculture and Rural Development Sector

Land and labour resources are key factors of production, and in Uganda the distribution and utilisation of these resources is a matter that is assuming policy and strategic importance. The other resource is water, whose distribution is important not only for access to fisheries resources as well as for crop and animal production but also for human consumption.

The analysis of the country's regional distribution of the total rural and urban population shows the pressure on land (population densities) and overall land availability (household availability). It further reveals that 88 per cent of the population are rural dwellers, with both the eastern and western regions having the highest proportion of the population (93%) living in rural areas. The central region with 75% of the total population in rural areas is the most urbanised of all the regions followed by the north with 86 per cent of the total population in rural areas.

Crop and livestock farming, and the extraction of aquatic and forestry resources employs 73.3 per cent of the working population (14 - 64 years old) and are thus the key primary economic activities of the Ugandan people. By comparison with other sectors, 66 per cent of the male working population is employed in agriculture compared to 5.8 per cent in industry and 28 per cent in services; and 81% of the female working population is engaged in agriculture compared to 3% in industry and 16% in services.

Agricultural production in Uganda is heavily resource-based, with labour and land being the most significant inputs. Other inputs are generally insignificant. The findings of the UNHS, 2006, show that improved seeds, fertilisers, agro-chemicals and manure were applied on only 6.3 per cent, 1.0 per cent, 3.4 per cent and 6.8 per cent of the parcels of agricultural land, respectively.

The primary[1] agricultural activities generate nearly 40 per cent of the country's gross domestic product (GDP), 70-80 per cent of export earnings, almost all domestic food requirements, and most of the raw materials required in local industries.

Following liberalisation of the export sector and encouragement of the private sector, most of the agricultural sector policy reforms in the past ten years were directed at liberalising

1 Primary agricultural activity relates to activities at the point or near the source of production and includes primary marketing.

the cash crops sub-sector. These reforms have resulted in substantive changes especially in the coffee, cotton, tea, tobacco and sugar industries where improvements in production have occurred, and also ushered in the growth of non-traditional exports which have increasingly reduced the relative importance of the traditional export sector. In 2005 for instance, coffee, tea and tobacco contributed 32.9 per cent of the country's total exports, while agricultural non-traditional exports (cereals, oil seeds, spices and fruits, hides and skins, roses and cut flowers, fish and fish products, and bananas) contributed 28.1 per cent of total exports. This therefore brought the total agricultural sector contribution to 61 per cent of national exports. This reflects a decline from 2001 when total agriculture sector contribution to exports was 70.6 per cent, of which traditional exports were 38.3 per cent and non-traditional exports were 32.3 per cent.

Agriculture and Human Development Performance

Despite the achievements attained towards poverty reduction, the challenges linked to high infant and maternal mortality rates, the HIV/AIDS prevalence and continued decline in the state of environment and natural resources could undermine agricultural performance, social transformation and ultimately human development.

The overall pattern of agriculture and livestock activities reflects a system that is dependent on rain-fed crop and livestock farming. This subjects the country's agricultural sector to the vagaries of the weather. Uganda has yet to develop and adopt irrigation and water harvesting technologies that would reduce the country's dependence on rain-fed agriculture.

Owing to the lack of a well established land use policy and proper management of the fragile ecosystems, the land sub-sector, which is a key determinant to the country's agricultural performance, is facing challenges that are associated with soil degradation from the population pressure. In the case of northern Uganda, there is an interlinked land ownership and access issue, particularly related to the communal ownership, resettlement of the population and the growing pressure resulting from its growing population.

The report shows that Uganda has made tremendous strides in the poverty reduction effort. In 1992/93, 56 per cent of Ugandans lived below the poverty line, and this proportion improved to 35 per cent in 1999/2000. Though this proportion increased to 38 per cent in 2002/03, it again improved to 31 per cent in 2005/2006. These positive results in efforts to fight against poverty confirm the outcome of improved HDI from 0.508 in 2000 to 0.581 in 2005. Although in general about 31.1 per cent of Ugandans were living in extreme poverty in 2005/6, poverty levels between rural (42%) and urban (12%)[2] still show a gap in poverty levels.

The central region had the highest HDI of all other regions both in 2003 (0.547) and 2005 (0.570), while the northern region had the lowest HDIs of 0.418 (2003) and 0.436 (2005). The western region came second to the central region with its indices standing at 0.487 and 0.539 for 2003 and 2005 respectively. The eastern region was ranked third in 2003 with HDI of 0.459, showing a slight improvement in 2005 with its HDI standing at 0.532.

The HDI for 2002, 2003, and 2005 (Fig. 3.15) was higher for the urban dwellers (0.643) than for the rural areas (0.508). Looking at the major components of the HDI namely

the Combined Education Index, Life Expectancy Index and GDP per Capita Index, the rural areas are not scoring high as compared to the urban areas. This explains consistent differences in the 2002, 2003 and 2005 rural/urban HDI. In addition to the above factors, the economy has experienced a major drive in private sector investment, which has been more attracted to urban areas because of the existence of better infrastructure and other services. This has kept the gap between the rural and urban areas in terms of their HDIs.

The national Human Poverty Index (HPI) for 2005 was estimated at 25.44 as compared to 36.0 for 2003 (see Table 3.3A Annex A and Fig. 3.18). This improvement could, among others, be attributed to three major factors: first, there was a decline in the adult illiteracy rate from 32.3 per cent in 2003 to 30.8 per cent in 2005. This improvement resulted from the concerted effort spearheaded by both the Ministry of Gender, Labour and Social Development and the Non-Governmental Organisations (such as Save the Children Fund, Action Aid Uganda, etc) to extend both Functional Adult Literacy (FAL) and Basic Education to all regions (including the conflict-affected population of northern Uganda).

The HPI measures deprivations in the three basic dimensions of the HDI. The HPI for central region was estimated at 20.19, which put the central region as the best performing region in terms of poverty reduction. The eastern region with HPI of 27.11 followed central region, while northern region had the highest HPI of 30.70, and hence the worse-off in terms of welfare status. Northern Uganda shows the lowest probability of one living up to age 40; with the highest level of illiteracy, and the highest percentage of children who are under weight for age. This is mainly attributed to the continued armed conflicts in the area that has kept the region in continuous deprivation. Western Uganda with HPI 29.56 was third. Limited safe water coverage was the main factor that contributed to this high level of HPI.

When HPIs for rural and urban areas are compared, urban areas performed better than the rural areas. The HPI for rural areas stood at 28.0 as compared to that of urban areas, which were 12.8 in 2005.

Comparing the rural and urban HPI for 2005 and 2003, showed a significant improvement for 2005. For both rural and urban areas, there was a reduction in poverty levels in 2005 as compared with 2003. However, for both periods under review, rural areas recorded and still exhibit comparatively higher poverty levels than urban areas.

The Gender Empowerment Measure (GEM) was calculated using district figures. The discussion, however, was only limited to the national level because of wrong impressions given by small districts on the parliamentary representation and the failure to assign general representation in parliament by the army, youth, workers etc that could not be assigned to districts or regions. In general, Uganda's GEM stood at 0.518 in 2005 as compared to 0.549 in 2003.

Policy and Strategy Challenges

Analysis in the report shows that the leading challenge of agriculture and rural development performance is the absence of a comprehensive National Agricultural Policy to guide prioritisation of investments and resource allocation. The current agricultural

2 National Household Survey 2005/06

development interventions are being guided by the Plan for Modernisation of Agriculture and its seven constituent pillars. However, the PMA only provides the strategy and operational framework for modernising the country's agricultural and rural development sector. In addition, agricultural interventions in Uganda remain largely programme or project type interventions (see PMA, NAADS, APEP, ASPS, AAMP, NWSHP), and this has over time constrained the realisation of the sector activities' wider impacts on human development.

While NAADS implementation approach (especially the outsourcing of the PSPs) is consistent with the PEAP, the effectiveness of the approach has been constrained by the omission of NAADS structures from the Local Government restructuring programme. In addition to this omission, the PSPs and farmer groups are discouraged by the farmer's contract periods being shortened from one year to as short as three months in some cases.

Key Recommendations

To enable achievement of positive interface between agricultural performance and rural development with human development, government should expedite the formulation of a National Agricultural Policy that would address the key issues of access to and utilisation of land, soils, irrigation, research, financing, marketing, mechanisation and accelerated orientation towards new farming systems.

In the case of northern Uganda, which has been affected by war for the last 20 years and is now lagging behind the rest of the country, an appropriate development strategy is required to revitalise and rehabilitate enterprises that are suitable within the agro-ecological environment. For instance, the production of oil seed crops such as sunflower, groundnuts, simsim, and cotton, cashew-nuts, and shea butternut). Key institutions such as the NPA and NAADS should be supported to undertake value chain development in the region thereby revitalising the local communities that are linked to the national economy.

Differentiated strategies for farmer categories should be developed for each pillar and the Non-Sectoral Conditional Grant (NSCG). The strategies should ensure that the particular concerns of marginalised farmers (women and the HIV/AIDS affected households) are addressed. To enable small-holder farmers cope with agricultural modernisation processes, NAADS should be encouraged to focus more on the low value crops, which currently produced by the rural poor farmers.

The role of NAADS in input distribution should be directed to cases where public distribution of inputs can be justified on the basis of short-term needs, for instance in post conflict northern Uganda, or areas of high population displacements.

NAADS should revisit the approach to farmer targeting by ensuring inclusiveness through addressing the needs of those who are not able to join a group for various reasons, for example, for those with limited access to productive assets.

Training and Capacity Building should be accorded urgent attention to reorient the agriculture service providers in the government's new approach on rural development strategy that mainstreams gender, HIV/AIDS and environment issues.

The process of contracting the PSPs should be reviewed and consideration be accorded to lengthening contracts up to at least medium-term duration in tandem with the government's own development planning framework.

At the primary school level, more pupil-friendly posters, tapes, videos, and informative materials should be developed and widely circulated in schools. Facilitation mechanisms to informal education approaches like visits to model farms should be applied to stimulate interest in pupils.

Functional Adult Literacy (FAL) as well as affirmative action strategies for the people with disabilities, women and other vulnerable groups should be formulated. Since attendance of FAL classes is gender sensitive, women and men should have separate FAL classes in order to encourage more men and women to join. Women FAL classes should be facilitated by women instructors. Instructors should be provided more training and incentives by introducing a modest user-fee payable to instructors.

In order to widen financial access and outreach to rural farmers, the following measures are recommended: (i) develop innovative financing packages that are suitable and flexible for small farmers with long gestation periods (ii) support mechanisms that trigger savings mobilisation at village level; (iii) devise strategies to attract small farmers to engage in expansion of their farming enterprises to semi-commercial and commercial farming; (iv) and decentralise financing of small farmers to ensure lower costs in processing, monitoring and enforcement of agricultural loans.

Key Messages

Poverty and Agriculture

With over 70 per cent of Uganda's population engaging in agriculture, and with 42 per cent of them living below the poverty line, promotion of agriculture would directly benefit the poor and hence reduce mass poverty.

Human Development Index

The overall human development outlook has improved due to good performance of GDP and life expectancy. However, its further increase has been impeded by stagnating literacy rates.

While the national HDI demonstrates improvement, the regional indices show wide variations with the north recording the lowest levels followed by the east.

Macroeconomic policies

Agriculture remains the mainstay of Uganda's economy accounting for 32 per cent of GDP, employing 73 per cent of the labour-force and contributing 85 per cent of export earnings, yet the sector is experiencing a declining trend in public investment, with direct public spending of less than 5 per cent of the annual budget.

Institutional framework

The Plan for Modernisation of Agriculture has made significant progress towards agricultural development. In spite of this, lack of a comprehensive national policy for agriculture and rural development constrains the potentially higher contribution of the sector and the achievement of Human Development and the Millennium Development Goals.

An institutional framework that focuses on developing a complete value chain from producer to consumer enables the realisation of increased productivity and incomes.

Enabling conditions

Supporting favourable agricultural conditions (market facilities, inputs, infrastructure, research and extension services and affordable credit) for smallholder and medium scale farmers positively impacts the quality of life of the majority population who reside in rural areas.

Food security

Land fragmentation compounded by limited use of technology, declining soil fertility and increasing pest challenges have resulted into lower agricultural production and productivity. This has affected food security at the household level with implications to human development.

Gender

One of the root causes of rural poverty is women's lack of control over productive resources. This inhibits women's participation in commercial agriculture and consequently negatively impacts on nutrition and health.

Land issues

Land is a fundamental asset for agricultural and rural development. Developing a secure land ownership system would encourage the efficient and effective use of land as a productive asset to lever human development.

Demography

High population growth and the consequent dependency, not accompanied by corresponding growth in GDP, and increased investment in social services will erode the gains in human development.

Environment

Uganda's agriculture remains largely rainfed with little use of technology and inputs to increase production and productivity. In order to enhance production for the rapidly expanding population and exports, there is a need for environmentally sensitive use of inputs.

Northern Uganda

With the LRA armed conflict coming to an end, agriculture offers an opportunity for Northern Uganda reconstruction and sustainable human development.

Support to and revitalisation of agriculture could significantly contribute to the development of the region and the national economy.

Discovery of petroleum resources

The country's recent discovery of petroleum resources will potentially have a positive impact on human development. While this will improve the GDP, focus on agriculture should remain high on the country's development agenda.

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1 INTRODUCTION AND BACKGROUND

CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 Uganda at a Glance

Uganda is a land-locked country, lying astride the equator in east-central Africa, occupying 241,551 sq. km., 18 per cent of which are inland waters and permanent wetlands. It is closely linked by economic and colonial history to Kenya in the east, and Tanzania in the south. To the north and the west lie the Sudan and the Democratic Republic of Congo (DRC), respectively, and further southwest lies Rwanda. There are cross-border ethnic linkages with nearly all the neighbouring countries, a fact of economic and socio-political significance for Uganda in the region.

With a population growing at the rate of 3.2 per cent per annum (UBOS 2007), Uganda has one of the highest population growth rate in the world, higher than the Sub-Saharan Africa average of 2.4 per cent. The mid 2007 population was projected to be 28.2 million; (2002 Census) of which 87 per cent live in rural area and 73 per cent of which are engaged in agriculture.

With a per capita income of US$ 334 in 2005, Uganda has made considerable progress in poverty reduction: from an income poverty of 56 per cent in 1992 to 31 per cent in 2006. However, the prolonged conflict in northern Uganda has led to regional disparity in poverty levels.

Uganda has a multi-party political system and enjoys a relatively vibrant civil society, the media as well as freedom of association and speech. Furthermore, government has implemented several affirmative and gender responsive policies that have empowered women and the girl child.

Despite the achievements attained towards poverty reduction, the challenges linked to high infant and maternal mortality rates, the HIV/AIDS prevalence and continued decline in the state of environment and natural resources could undermine agricultural performance, social transformation and ultimately human development.

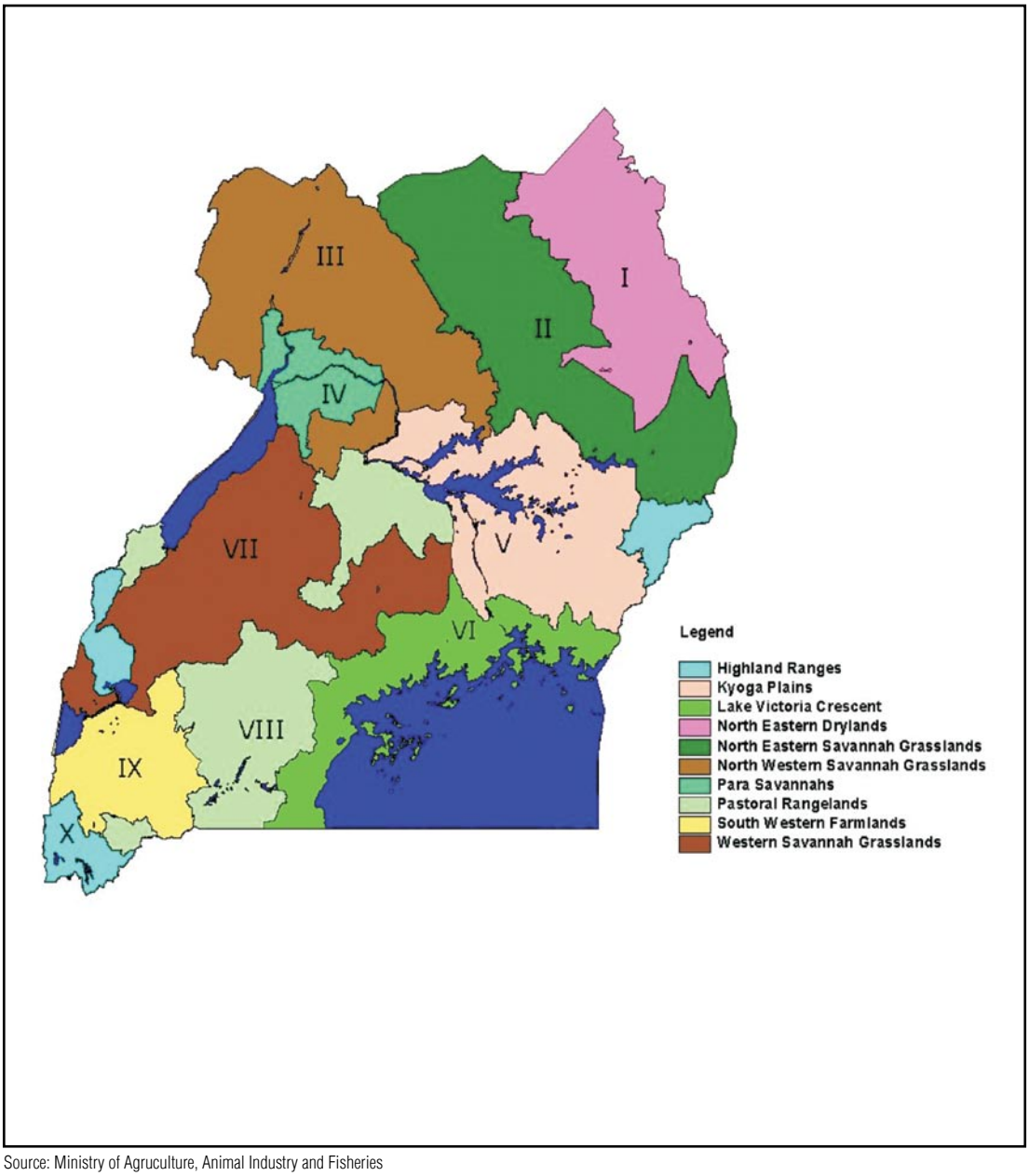
1.2 Geographical Context

Uganda has favourable climate and fertile soils, which are two basic attributes that determine its agricultural potential. The country has a diversity of geographical features ranging from high altitude zones (+1500m) to medium and low altitude zones (<900m). Most of the country lies on the plateau that is 900-1000m above sea level. The country's equatorial climate is moderated by its altitude, and where more than 75 per cent of the land is arable. Three-quarters of the country receives 1,000mm to 1,500mm of rainfall annually and enjoys two cropping seasons per year. The drier northeastern quarter of the country receives 600mm – 900mm of rainfall in a single season which runs approximately from April to October, and it is more prone to dry spells that occasionally disrupt crop production and the availability of food. Livestock production is particularly important in the drier areas of the corridor that runs across the country from the northeast to the southwest and which is known as the cattle corridor.

The overall pattern of agriculture reflects a system that is dependent on rain-fed crop and livestock farming. This subjects the country's agricultural sector to the vagaries of the weather. Uganda has yet to develop and adopt irrigation and water harvesting technologies to any significant extent that would reduce the country's dependence on rain-fed agriculture.

The country's various agro-ecological patterns which are derived from a combination of soils, climate and human activities, have a major impact on crop and animal production, and a further influence on the environment. Therefore, while in Uganda agricultural production takes place over nearly the entire habitable land area, there exists endowment variation in the different ecological zones. For instance, while some zones have a high agriculture potential and can support different combinations of crops and livestock, others have inherently low land productivity (see agro-ecological map Fig. 1.1 below).

Fig. 1.1 **Uganda's ecological zones**



Source: Ministry of Agruculture, Animal Industry and Fisheries

It is for this reason that the Government of Uganda (GoU) has recently introduced a designation of ten Agricultural Production Zones covering the entire country as an analytical and planning tool. The classification is based on agro ecology, farming systems and management, socio economic factors, geopolitics, infrastructure, land distribution and ongoing development programmes. The Environment and National Resources (ENR) sector also provides base for diversification of rural enterprises as well as alternative employment opportunities. Already, even at low levels of public investment, agricultural sub-sectors such as fisheries and forestry have enabled the rural poor people to raise their incomes.

Owing to the lack of a well established land use policy and proper management of the fragile ecosystems, the land sub-sector, which is a key determinant to the country's agricultural performance, is plagued with soil degradation resulting mainly from population pressure.

Being land-locked, Uganda faces many challenges of access to international markets. Major international and regional trade exports and imports involve long overhauls through third countries to and fro regional seaports. For good access to regional and international markets, both rail and air transport are particularly and potentially important for Uganda; so are waterways, especially for regional connections and development. The transshipment infrastructure necessary to efficiently support these haulage are presently not well coordinated.

Uganda's capacity to exploit the economic potential accorded by its central position in the Great Lakes Region is not being fully exploited. For instance, Uganda produces substantial quantities of food products that are perishable (banana/matooke, cassava, sweet potatoes, Irish potatoes, fish, meat, fruits and vegetables, etc.) and which cannot withstand transportation over long distances, notwithstanding high transportation costs across the country due to varying terrain. The inadequate transshipment infrastructure exerts a restraining effect on both agricultural production and marketing, especially of agricultural products, which are marketed in bulk.

1.2 Population

1.2.1 Population Trend, Distribution and Internal Migration

Uganda's population has been almost doubling every 20 years: from five million in 1948 to 9.5 million in 1969; and from 12.6 million in 1980 to 24.2 million in 2002. The findings of the 2002 Population and Housing Census indicate that the population of Uganda was increasing by 3.2 per cent per year over the period 1991 to 2002. In absolute numbers, the population increased by 7.5 million people between the Census of 1991 and that of 2002, which is the highest inter-censal increase ever recorded in Uganda. With a population growth of 3.2 per cent per annum, Uganda has the third highest population growth rate in the world, higher than the Sub-Saharan Africa (SSA) average of 2.4 per cent. According to the UN projections, Uganda's population is expected to reach 103.2 million people in 2050, assuming fertility rate declines considerably to 2.9 between 2045 and 2050. Table 1.1 gives inter-censal population growth rates.

The high population growth rate is attributed to high fertility rate, low prevalence of family planning methods, young marriage age for women (17 years of age on average), and the high influx of refugees. According to the recent Demographic and Health Survey (2006), fertility rate for rural Ugandan women is 7.8 while for urban women is 4.3 births respectively.

Table 1.1 Population size and Inter-censal Growth Rate

Inter-censal Period (Year)	Population size (mill)	Inter-censal period	Growth Rate (%)
1948	5.0	1948-1959	2.5
1959	6.5	1959-1969	3.9
1969	9.5	1969- 1980	2.7
1980	12.6	1980 – 1991	2.5
1991	16.7	1991 – 2002	3.2
2002	24.2	2002 – 2012	N/A[3]

Source: State of Uganda Population Report, 2006 (UBOS)

The distribution of Uganda's population by region is shown in Table 1.2 below. The population trend shows that the central region has the highest population followed by eastern and western. However, the northern region has the highest population growth followed by the eastern region. This regional trend in population growth has long-term implications to gender time-poverty, access to land, service delivery and human development.

Table 1.2 Population by Region: 1991, 2002 and 2006

Region	Year 1991	% of total	Year 2002	% of total	Year Mid-2006	% of total
Central	4,843,594	29	6,575,425	27	7,245,900	26
Eastern	4,128,469	25	6,204,915	26	7,063,800	26
Northern	3,151,955	19	5,148,882	21	6,050,300	22
Western	4,547,687	27	6,298,075	26	6,996,900	26
Total	16,671,705	100.00	24,227,297	100.00	27,356,900	100.00

Source: 2002 Population and Housing Census Report, UBOS

The distribution of Uganda's population by sex is shown in Table 1.3 below. The gender composition broadly shows 49:51 for male and female. Besides HIV/AIDS and war-related male deaths, the proportion of the elderly and female-headed households is currently emerging as one of the most critical demographic phenomenon in rural areas as the migrants of young people and men to the urban areas. This has impacted on the composition of the agricultural labor force by age and sex with implications for the division of labour in agricultural systems. For instance, the feminisation of agriculture has arisen due to the shortage of labour and capital that force female-headed households to make adjustments in agriculture activities, thereby resulting into a decline in production. Besides a decline in acreage and usage of improved farming methods, female-headed households and the elderly tend to shift to less nutritious crops and consequently suffer from increased malnutrition and food insecurity (FAO, 2006).

Table 1.3 Population by Sex (2002 Census)

Region	Male	Female	Total	Female-Male Ratio
Central	3,230,637	3,344,788	6,575,425	104
Eastern	3,012,851	3,192,064	6,204,915	106
Northern	2,522,121	2,626,761	5,148,882	104
Western	3,058,948	3,239,127	6,298,075	106
Total	11,824,557	12,402,740	24,227,297	105

Source: 2002 Population and Housing Census Report, UBOS

Table 1.4 below shows Uganda's population in rural and urban areas. As can be observed, Uganda's urban population has risen from 6.7 per cent in 1989 to 15.4 per cent in 2006. The central region has more than half of the urban population (56.6%) followed by the north, the western region has 14.5 per cent and the eastern has 14.2 per cent. The rate of rural to urban migration (urbanisation) that is attributed to insecurity and rural poverty is outrunning the capacity of urban centres to provide the expected necessary social services and employment, thus worsening urban poverty (National Housing Survey, 2006, UBOS).

Table 1.4 Percentage distribution of the Population by Rural-Urban Divide (2002 and 2006)

Region	Urban		Rural		Total	
Central	**2002**	**2006**	**2002**	**2006**	**2002**	**2006**
Eastern	58.4	55.9	25.0	24.4	24.4	29.2
Northern	15.5	12.8	29.3	27.4	27.4	25.2
Western	10.5	18.4	19.5	20.0	20.0	19.7
Total	15.6	12.9	26.2	28.2	28.2	25.9
	100.0	100.0	100.0	100.0	100.0	100.0

Source: Uganda National Household Surveys 2002, 2005/2006, UBOS

3 Will not be available until next Population Census

According to the Population and Housing Census (2002), the population density for Uganda was 123 persons per square kilometre, which was much higher than Tanzania (39), Kenya (54), and Sudan (66), and lower than Rwanda (281), and Burundi (243) for the same year. The population density for 2006 was projected to have increased by 13 per cent over the four years to 139 people per square kilometre. The 2002 population density varies from district to district, and from region to region, with Moroto district having the lowest (22 in 2002 and 27 in 2006) and Kampala district having the highest (7,259 in 2002 and 8,295 in 2006).

Table 1.5 shows the population distribution by age group over the last three censuses. Uganda has a young population below 15 years of age. In 1969, 46.2 per cent of the population was in this age group, while in 1991 this age group's share of the total population increased to about 47.3 per cent and further up, to 49.3 per cent in 2002. On the other hand the share of the economically productive age group (i.e. 15-64 years) decreased from 50 per cent in 1969 to 47.7 per cent in 2002, implying that the dependency ratio is on the increase.

Table 1.5 Percent Population Distribution by Age Group, 1969 – 2002

Age Group	1969	1991	2002	2006
0-14 years	46	47	49	51
15-64 years	50	49	48	46
65 + years	4	4	3	3
Total	100.0	100.0	100.0	100.0

Source: 2002 Population and Housing Census Report and UNHS, UBOS

Uganda is one of few countries in Africa with large population of internally displaced populations. There is also a large population of internally displaced persons (IDPs) in the country (See table 1.6 below). In the western parts of the country, most of the internal population movements have been mainly in search of land (from districts where there is extreme land shortage to districts where land is relatively abundant). In the north, on the other hand, the armed insurgency has caused displacement of local communities and forced people to relocate to areas where they may be better secured. The combined effect of this insurgency coupled with cattle rustling in the northeastern part of the country has been forceful displacement, and involuntary movement of people, leading to a high population of internally displaced persons living in camps (see Table 1.6).

Table 1.6 IDP Population in the Conflict affected Districts, 2007[4]

No.	District	District Population	IDP Population
1	Amuru	180,022	77,870
2	Apac and Oyam	676,244	128,244
3	Gulu and Amuru	528,800	458,528
4	Katakwi	118,928	75,582
5	Kitgum	324,435	296,812
6	Kotido, Abim, Kaabong	377,102	-
7	Lira	530,342	343,737
8	Moroto	218,939	-
9	Nakapiripirit	155,149	-
10	Pader	326,328	338,939
Total		3,436,289	1,719,712

Source: UN-Consolidated Appeal Process Report, 2007

1.2.2 Implication of High Population Growth on Poverty Reduction

The high population growth rate is undermining efforts to boost economic growth, achieve universal education, reduce mortality and improve health. Uganda's economy is currently growing at 5.6 per cent per annum. While Uganda's population at its current annual population growth rate of 3.2 per cent is expected to double every 20 years, it is estimated that Uganda needs a sustained economic growth rate of 9.6 per cent to ensure a steady welfare improvement among the rural masses. With a population growth rate of 2.8 per cent per annum as a target (PEAP, 2004-08), poverty is expected to reduce to 10 per cent by 2017, even if annual real GDP growth remained at 6%. Thus a reduction in the rate of population growth would have a

4 This figure has since changed when the government commenced return and reintegration process in early 2007

positive impact on the level of per capita GDP growth, and on per capita incomes and would help achieve the MDG targeted child mortality rates (of 2/3) and improved maternal mortality rates (3/4) and would allow more resources to be spent per person, leading to improved and quality social services.

According to the State of Environment Report (NEMA, 2005), the increasing population growth in the rural areas is putting greater pressure on land resources and consequently undermining the capacity of the rural dwellers to produce enough food for both domestic consumption and the market. If the population continues to grow at the current rate of 3.2 per cent, the average available arable land will shrink to only 0.26 ha per person by the year 2030. Increasing pressure on land and poor land use practices have led farmers and livestock keepers to invade areas gazetted for nature conservation as well as land considered marginal for agriculture. Many farmers now practice cultivation in wetlands, riverbanks, shorelines and hilly areas that are fragile and susceptible to destruction.

At the current fertility rate of 7.1 children per rural woman and with average land holding of 0.9 ha of arable land per person, and with an average per capita income of US$ 334 (2005), most households in Uganda cannot support such large families. This implies that many rural Ugandans are likely to continue living without access to basic needs of life (adequate food, shelter, education, and health care services). The challenge of access to these basic needs impinges on life expectancy of rural masses. Thus, agriculture sector should grow fast enough to provide more food to feed the increasing population. Without adequate family planning services and appropriate technologies, large families are putting pressure on land holdings and consequently reducing agricultural productivity. As large families sub-divide their assets, they become poorer and landless and ultimately encroach on other natural resources. Famine, floods and epidemics, which mostly affect rural populations, are a direct result of population pressure on the environment.

1.2.3 Performance in Human Development

Improving human development is a major goal of GoU as articulated in the national development-planning framework, the Poverty Eradication Action Plan (PEAP). To add impetus to the PEAP, GoU has also formulated two mutually supporting strategies: the Peace, Recovery and Development Plan (PRDP) and the Prosperity for All, popularly known as Bona Bagaggawale, which is anchored on the Rural Development Strategy.

At the sectoral level, government has prioritised investments toward basic education as well as adult literacy. In addition to the Universal Primary Education (UPE), which was launched in 1996/97, GoU has launched the Post-Primary Education and Training (UPPET) and Universal Secondary Education (USE) in the 2007/08 Financial Year. The government's commitment to education as a development strategy is spelt out in the Education Strategic Investment Plan (ESIP) and Vision 2025. Progress towards attainment of the Millenium Development Goals (MDG) based Uganda's basic education, is illustrated in Table 1.7.

Table 1.7 Trend of Key Primary Education Indicators

Year	2000	2001	2002	2003	2004	2005	2006
Enrolment ('000s)	6,559	6,901	7354	7,633	7,377	7,224	7,225
Number of Primary Teachers ('000s)	110	127	139	146	147	145	150
Number of Primary Schools	12,480	12,280	13,332	13,353	13,371	13,576	14,093
% Annual change in enrolment	4.3	5.2	6.6	3.8	(3)	-2.1	0.0
Pupil Teacher Ratio	59	54	53	52	50	50	48
Pupil Classroom Ratio	96	90	87	87	79	74	71

Source: Statistical Abstract, UBOS, 2006

In the health sector, the strategic goal, which is contained in the National Health Policy (1999), is the attainment of good health standards by all Ugandans in order to promote a healthy and productive life. This is being realised through the implementation of the Health Sector Strategic Plan (HSSP) and other reforms in the health sector. Key health-related outcome indicators (Table 1.8) show that there has been a steady, though slow, progress towards meeting the MDG targets in the health sector.

Table 1.8 Health-related Outcome Indicators

Indicator	1995	2001	2006	MDG Target (2015)	PEAP Target (2017)
Infant mortality rate	81	88	76	41	64
Child mortality rate	147	158	137	60	320
Maternal mortality ratio	527	505	435	131	
Stunting	38%	39%	38%	19%	

Source: Uganda Demographic and Health Survey, 1995, 2001/02,2005; Poverty Monitoring and Evaluation Strategy 2002, 2004; UN Millennium Development Goals: Adopted from MFPED, 2006.

According to the Sector Review for 2005 of the Ministry of Water, Lands and the Environment (MWLE, 2005), there has been a significant progress towards improving water and sanitation coverage for the country. The Ministry of Finance, Planning and Economic Development (MFPED) records that the percentage of people accessing safe water increased from about 20 per cent in 1991 to 60 per cent in 2004 and 63.5% in 2005. There are, however, rural-urban disparities in accessing safe water whereby 60 per cent of rural and 67 per cent of urban dwellers have access to clean water. However, trekking long distances in search for water, in some cases up to 5 kms, remains a major concern to rural women and children.

1.2.4 National Poverty Profile

Eradicating poverty and attaining rapid, equitable and sustained economic development for social transformation remain Uganda's major challenges in achieving the MDGs. Income poverty fell from 56 per cent in 1992 to 44 per cent in 1997/8 and 34 per cent in 1999/2000, but then rose again to 38 per cent in 2002/03 and declined to 31 per cent in 2005/6. While Uganda has made progress in reducing income poverty, HIV/AIDS prevalence as well as increasing school enrollment, access to safe water and gender parity, areas of slow progress are observed in combating infant, under-five and maternal mortality; reducing malaria; improving environmental sanitation and living standards in the slums; and reversing the loss of environmental resources, such as wood fuel sources, lack of soil erosion control, and other related environmental services.

Although the most recent household surveys indicate that the national poverty levels have declined from 38 per cent in 2002/03 to 31 per cent in 2005/06, rural areas show a steeper decline than the urban areas. Strong growth in consumption among the rural population partly led to a significant poverty reduction. While rural areas registered a steeper decline in poverty levels than the urban areas, the incidence of poverty still remains higher in rural areas than in urban areas. In absolute terms, the number of the poor persons in urban areas has remained the same since 1992/93. However, there are still problems faced by the urban poor including personal insecurity, in decent housing as well as lack of clean water and sanitation. Progress in poverty reduction across geographical locations still remains a challenge. For example, rural poverty levels in the northern region are still high at 68 per cent (2005/6) and have not registered significant decline from the 62 per cent of 1992/3 as observed in other regions.

The percentage of people in poverty in rural areas declined from 42.75 per cent to 34.2 per cent, corresponding to a decline in absolute number of rural people in poverty from 9.3 million to 7.9 million

in rural areas (UBOS, 2007). The 2005/06 survey showed strong growth per household, per capita and per adult equivalent expenditure, especially in rural areas. In urban areas, the corresponding decline was from 14.4 per cent to 13.7 per cent. In absolute terms, the number of the poor persons in urban areas has remained the same since 1992/93. In terms of the wider rural development sector, a combination of low agricultural productivity and poor performance of the off-farm agriculture and non-farm economic development activities has reduced the potential for rapid rural development (See Box 1.1).

Besides the critical physical attributes, socio-economic factors have also a strong influence on production performance and on the fortunes of farmers in any given area of the country. The analyses in key government policy and strategy documents notably the PEAP and the Plan for Modernization of Agriculture (PMA) show that the majority of farmers in rural areas of the country suffer from low price levels as well as limited access to appropriate production technologies and markets, finance, infrastructure, and gender inequalities, amongst many other factors. This has kept agricultural productivity low over long periods, and has led to the inability of small-holder farmers to break out of the poverty trap.

The complexity and multi-dimensional nature of rural poverty in Uganda point to the need to embrace a holistic and integrated approach to agricultural and rural development whereby the social, gender, environment, technical and economic dimensions of development are considered. In order to improve human development in the rural areas that rural development strategies as clearly spelt out in the PMA must be at the same level of implementation to improve production and marketing.

1.2.5 Gender Poverty and Vulnerability

Analysis of the population currently living below the consumption poverty line indicates that poverty impacts differently on different groups. A study[5] Mijumbi, P. and Okidi, J. (2001). "Analysis of Poor and Vulnerable Groups in Uganda". Economic Policy Research Centre (EPRC), Makerere University, Kampala. on poor and vulnerable groups in Uganda showed that the most vulnerable groups are children, orphans, youth; also households headed by widows, the elderly, and children; and people living with disabilities. Integrated household surveys since 1990 have revealed significant overall differences between male (72% of total) and female (28%) headed households.

Box 1.1 Rural poverty is influenced by a combination of factors

- Weak agricultural prices and slow growth in agriculture, aggravated by coffee wilt and erratic weather patterns.
- Decreasing soil fertility and loss of natural resources resulting from lack of regulation, poor farming methods, coupled with pests and diseases and environmental stresses.
- Poor diets, a heavy burden of disease and poor health (including HIV/AIDS, Malaria and Tuberculosis) resulting in low work output, high health costs and premature death with associated expenditures and loss of household incomes.
- Gender inequalities with respect to access and ownership of productive resources.
- Investment in public sector support to agriculture has not targeted the poorest.
- Insecurity in the North and East has reduced production, limited access to land and increased the risk to investments.
- Increasing inequality of asset ownership – richer households are accumulating land and other productive assets, while poor households are selling to cover immediate cash needs.

Source: The PEAP, 2004. Ministry of Finance, Planning and Economic Development.

5 Mijumbi, P. and Okidi, J. (2001). "Analysis of Poor and Vulnerable Groups in Uganda". Economic Policy Research Centre (EPRC), Makerere University, Kampala.

The data shows that the female-headed households are more likely to slide into poverty and less likely to escape from it. Investigations into the gender dimension of poverty in Uganda have revealed that women poverty is associated with their limited access to productive resources, low literacy levels, unemployment and low earnings from petty trade. The HIV/AIDS pandemic worsens their burden of looking after children, large families, and orphans.

Uganda's agriculture sector shows inequality in gender relations with respect to production and marketing (see Box 1.2). While women carry out most of the agricultural activities, the men control the proceeds of the cash crops, and the women have control over food crops, mainly for subsistence. This unequal gender relationship increases women time poverty reducing productivity and success of women business ventures, food security and welfare. HIV/AIDS aggravates the burden of women since it is their responsibility to take care of AIDS patients, compromising their time to engage in agricultural activities. Women's limited control over land and livestock inhibit's their ability to influence income proceeds from such assets.

Box 1.2 Gender Dimensions in Uganda's Farming system

- Women constitute the majority of the estimated 70% of smallholder subsistence farmers and contribute 70-75 per cent of agricultural production; an average 55 per cent of labour for land preparation; 65% for planting; 85-90 per cent for weeding; and over 95 per cent for food processing.
- Women are responsible for a variety of post-harvest activities ranging from crop preservation to processing and storage. Women are responsible for 60 per cent of harvesting and 90 per cent of preparation and processing.
- Within farming systems, men tend to concentrate on the production of cash crops while women concentrate on the production of food crops (70-80%) mainly for family consumption.
- The incidence of poverty is highest among the food-crop-producing category implying that women make up the majority of the rural poor and yet food crop production predominates the agricultural sector (contributed about two-thirds of agricultural GDP in 2002/03, crops are the dominant source of rural household incomes about 70%).
- Up to 78 per cent of the rural women determine the daily food outflow both within and outside the household but decisions to marketing mostly (70%) done by men.
- Men are largely involved in large livestock keeping (mainly cattle) while women concentrate on poultry, fishing and small ruminant management.
- Women own only 7 per cent of the land.

Sources: NARO. Medium Term Plan 2001-2005. February 2001; PEAP Revision Paper for the Agricultural Sector (2004)); MAAIF: Development Strategy and Investment Plan (2004/05-2006/07), September 2004.

Women farm in Namukora, Kitgum district: Women contribute the largest portion of labour force in agriculture, yet own no land, most times are not literate. Factors like these reduce human development indices

Box 1.3 Poverty and Gender Concerns in Agricultural Sector

Research	• Agricultural research does not adequately respond to women's technological needs. • Low adoption rates amongst the low income subsistence farmers, especially the women. • Agricultural research does not emphasise time and labour-saving technologies thus increasing women time poverty.
Extension	• Food production, which is the responsibility of women, does not adequately benefit from NAADS. • Limited capacity of service providers to integrate gender and address women specific agricultural needs. • Limited participation of women compared to men in farmer groups owing to women's domestic work burden. • The poor women and men may not access extension services due to costs related to time, distance and lack of income to pay for private services.
Credit	• Limited ownership assets especially land as lack of collateral is aggravated by formalities, which require spouse co-signing on loan forms. • Generally financial services providers consider it risky to extend credit to farmers especially women who comprise 77 per cent of small-holder scale farmers. • High interest rates and short borrowing periods discourage women and the poor and rural women except those engaged in trade/commerce.
Natural resources	• Limited ownership of land by women (7%) limits their capacity and motivation to increase agricultural production. • Limited access to and involvement of women in decision making over environment resources. • Women are more vulnerable than men to the impact of environmental degradation resulting in increased distance in collecting water and firewood.
Infrastructure	• Lack of access and ownership to motorized and non-motorized means of transport by the poor women and men. • Women domestic chores are labour and time consuming and result in women's time poverty. • Up to 70% of all marketed agricultural produce is transported by head loading, a task largely undertaken by women. • Only 7.8%[6] of community access roads are in a good or fair condition. This limits access to social services.
Agriculture **Education**	• Poor coverage of electricity in rural areas and limited utilization of appropriated cooking stoves. • Higher illiteracy rates amongst women constrains their ability to access/ utilise advisory services and hence improve their livelihoods. • Fewer women are enrolled and pass out in agricultural tertiary institutions. • Agricultural education curriculum does not take into consideration the different gender roles of women and men.
Agro-processing	• Limited involvement of women in agro-processing. • Fewer women than men involved in large scale commodity production and marketing. • Women farmers have limited access to market information compared to male farmers.

Source: PMA Gender Mainstreaming Guidelines, 2006

1.3 Economic Development

Economic growth is one of the major factors that contribute towards achievement of human development, and is dependent on the country adopting and implementing sound economic development principles coupled with it having efficient institutions. Supported by the international donor community, the GoU launched a minimum economic recovery programme[7] in 1987, and has since developed and sustained a macroeconomic framework that has helped to transform the country's economy from the status characterised as a "basket-case" in the early 1980s to a "success story" by the mid 2000s. The key elements of the macroeconomic framework and the factors that have helped to drive growth have been the control of inflation, maintenance of a competitive exchange rate and low

6 Ministry of Works, Housing and Communication – DUR July 2005
7 The Minimum Economic Recovery Programme included liberalisation of the foreign exchange and trade, removal of statutory controls of produce marketing boards, and fiscal reforms.

and stable interest rates, a steady growth in private sector investment, and expansion of credit to the private sector. Uganda has consistently implemented these reforms, and as a result has achieved economic growth in recent years averaging 5.6 per cent per year (Table 1.9).

Table 1.10 Sector Contribution to GDP at Current Prices

Contribution to GDP	2001/02	2002/03	2003/04	2004/05	2005/06
Agriculture	39.9	39.1	37.3	35.1	33.3
Industry	18.9	19.3	19.8	20.6	20.9
Services[9]	41.2	41.7	42.9	44.3	45.8

MFPED 2006; Background to the budget for Financial Year 2007/08

Table 1.9 Key Macroeconomic Performance Indicators

Indicator	2001	2002	2003	2004	2005
Real GDP Growth (%)	4.9	6.4	4	6	6
Per Capita GDP (Ug Shs)	434,349	431,441	479,244	519,163	575,405
Inflation Rate (%)	4.5	-0.3	8.7	3.7	8.5
Deficit/ GDP (%)*	-10.2	13	11.2	9.9	8.6
Private Sector Credit (Ug Shs bn)* **Mid Year Figures**	634.93	661.66	848.6	1009.98	1222.48
Credit to Government (Ug Shs bn)* **Mid Year Figures**	460.63	482.04	390.36	68.23	-176.31
Debt/Exports (%)*	16.56	17.55	16.03	15.4	13.11
Debt Stock/GDP (%)*	65.46	67.38	65.45	50.75	58.71
Revenue /GDP (%)	10.9	12.2	12.2	12.6	12.7
Exports by Value ('000 US$)	451,765	467,605	534,106	665,090	812,857
Imports by Value ('000 US$)	1,006,557	1,073,732	1,375,106	1,726,238	2,054,137

Source: MFPED (2006); UBOS (2006)
Note: Indicators with * refer to Fiscal Years

The per capita Gross Domestic Product (GDP) growth was, however, much slower on account of Uganda's high rate of population growth. Whereas per capita income grew by 2.7 per cent per annum over the period (2001-2005), the population grew by 3.2 per cent per year. Thus, aside from the changes in productivity level aggregates, demographic constraints also contributed to lower per capita incomes in Uganda, now estimated at US$ 334. Although the agricultural sector share has been declining over time (see Table 1.10), it continues to play a leading role in the country's economy. For instance in 2005/06, it accounted for 34 per cent of GDP; generated 85 per cent of export earnings; and absorbed 73 per cent of the total workforce. However, both industry and services[8] sectors have expanded, contributing a combined 66 per cent of GDP in 2005/06.

In spite of the considerable efforts to reform the economy, and considering the substantive gains recorded in economic growth over the last decade, the overall welfare of the rural population has not correspondingly registered a significant improvement. While the modern sectors, including services sector, commercial agriculture, and real estate, among others, have positively responded to the macro-economic policy stimuli, the small-holder farmers have not equally responded to the same stimuli. This challenge is compounded in the north and north-east by insecurity where the sub-regions' economic potentials have been stifled.

1.4 Political and Administrative Management

The Constitution of the Republic of Uganda provides the overall legal basis for government to plan and implement development programmes for the country[10]. The challenge of uplifting the livelihoods and quality of life of the people draws its

8 Services are composed of several sectors such as finance, health, education, utilities etc.
9 Op cit
10 The legal basis and requirement is explicitly stated in the Constitution's National Objectives and Directives, whereby the state is tasked (through Line ministries) to define the national social, economic, and development agenda, as well as in ensuring that the people participate in its definition and implementation.

impetus from international development commitments, to which Uganda is party, and clearly pronounced in the MDGs[11] whose targets are interfaced with Uganda's shared vision, sector priorities, and plans.

Uganda's political and administrative management is operated through a local government system constituted by districts, sub-counties, parishes, and villages on one hand and municipalities, town councils, divisions and wards on the other. As of July 2006, there were 77 such districts (refer to Fig 1.2). Below the districts are lower local governments and administrative unit councils. Local Government Councils have people directly elected to represent electoral areas; while people with disabilities, the youth and women councilors form one third of the councils. The Local Government Councils are corporate bodies, having both legislative and executive powers. They have powers to make ordinances for districts and bylaws for municipalities and sub-counties.

Decentralisation, whose main objective was to devolve state power and facilitate the social transformation and modernisation of the country, was one of the several reforms initiated under the Uganda's Decentralisation Policy. It embraces three unique features: de-concentration which has transferred powers and responsibilities to lower administrative units manned by centrally appointed officials; delegation which allows the transfer of powers to lower administrative units that are granted some relative discretion to appoint their own officials to carry out delegated functions; and devolution, which has transferred power to lower administrative units.

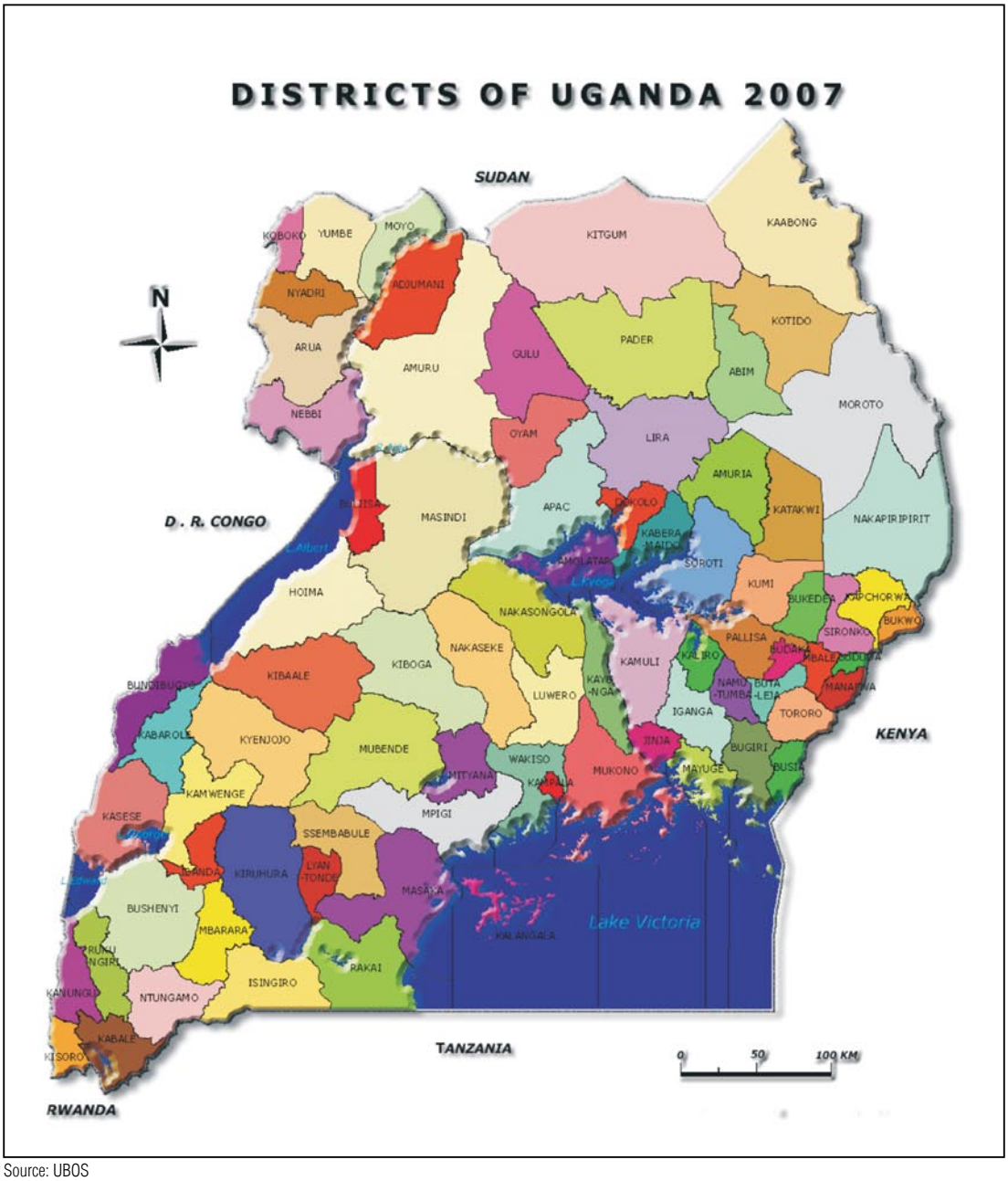
Decentralisation reform at the administrative, political, financial and service delivery levels have not only proved to be a deliberate policy shift focusing on responsibility for development of local authorities, but also an instrument aimed at improving local democracy, accountability, transparency, as well as improved efficiency, effectiveness and sustainability of service delivery countrywide. Under the policy, the central government is responsible for the formulation of national policies and national standards; and monitoring the implementation of the national policies and services to ensure compliance with standards and regulations. Line ministries carry out technical supervision, provide technical advice, monitor local governments and liaise with international agencies.

Delegation, which transfers powers to lower local governments, has been well embraced within the country's institutional and legal framework, as it allows the local administrative units some relative discretion to carry out defined responsibilities without recourse to the centre. Schedule II of the 1997 Local Governments Act accords local governments power over the production, primary education, and community access roads sectors. However, the local revenue base to support these activities has been on a decline due to reforms in local administration revenue mobilisation.

Devolution, which entails a much more expansive transfer of power to lower administrative units, has not only granted corporate status to local governments but has also accorded local people significant say in decision-making and local priority setting, in addition to enabling them to hold local officials accountable.

11 1) Eradicate Extreme Poverty and Hunger; 2) Achieve Universal Primary Education; 3) Promote Gender Equality and Empower Women; 4) Reduce Child Mortality; 5) Improve Maternal Health; 6) Combat HIV/AIDS; 7) Ensure Environmental Sustainability; 8) Develop a Global Partnership for Development.

Fig. 1.2 Map of Uganda showing districts (as of 2006/07 Financial Year)



Source: UBOS

2

CONCEPTUAL FRAMEWORK

CHAPTER 2

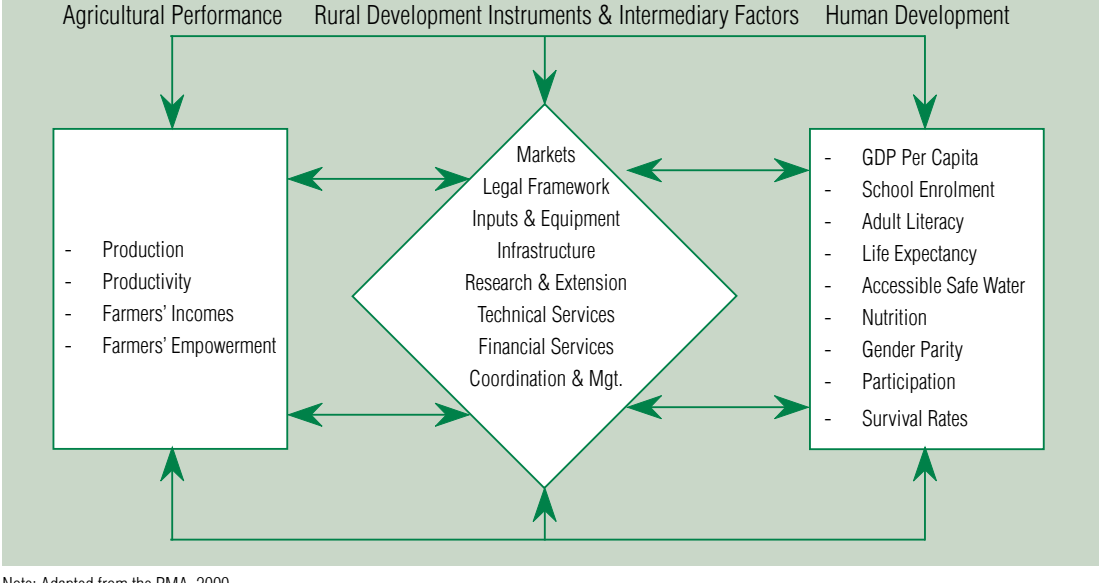
CONCEPTUAL FRAMEWORK

2.1 Conceptual Linkages

Rural development is a process that aims at reducing poverty and improving living standards through sustainable and broad-based growth and investment in the people who reside in the countryside. For economies whose mainstay is agriculture, efforts directed at sustainable rural development contribute to four critical development goals, namely, poverty reduction; widely shared growth; household, national, and global food security and; sustainable natural resources management.

Globally, the majority of the rural poor depend on agriculture for most of their meager livelihoods, and these rural poor live in regions where arable land is incrementally scarce, agricultural potential is low, and drought, floods, and environmental degradation are common. There is limited access to basic human needs – education, potable water, health care, and sanitation – in rural areas. In addition, the problems of malnutrition, low life expectancy and high infant mortality are more severe in rural areas. Ensuring adequate growth of the world's food supplies is therefore not enough. It matters where agricultural production takes place and who receives the associated income. Only if rapid agricultural growth occurs in countries with impoverished rural populations, can rural farm and non-farm incomes rise sufficiently to enable the rural poor to afford more and better food. And only if the many rural small holder farmers are equipped to participate in agricultural growth, will rural poverty be reduced and wages for unskilled labour rise in rural and urban areas.

Fig. 2.1 **A Conceptual Linkage: Role of Rural Development in Achieving Human Development through Improved Agricultural Performance**



Note: Adapted from the PMA, 2000

The ways in which agriculture can affect the overall poverty can be direct and indirect. The direct way implies that agricultural growth lowers directly the degree of poverty in rural areas and the whole economy. The indirect way, however, implies that agricultural growth contributes to overall poverty reduction through the contribution of agricultural to overall growth, and through the latter's contribution to poverty reduction, and ultimately to human development. Figure 2.1 above shows the inextricable linkage between agricultural production, its productivity and incomes and the intermediary variables that are critical in triggering human development outcomes, namely health, education, accessible safe water, among others. In ideal situations, the extent to which the pivotal variables are supported (markets, inputs and equipment, infrastructure, financial services, technical services, as well as research and extension) has a direct bearing on rural development, the commensurate quality of agricultural performance and ultimately the level of human development. Conversely, the lack of required support mechanisms to the pivotal variable have a corresponding negative effect to the quality of agricultural performance and ultimately the level of human development.

2.2 Agricultural Performance

Agricultural performance is a measure of the changes (positive or negative) in the principal variables that constitute the agricultural sector. A highly simplified agricultural system is illustrated in Figure 2.2 below, which depicts three basic subsystems of the sector: (a) a production system that encompasses crop, animal, fishery and forestry production; (b) a supporting system that comprises markets, inputs and equipment, and infrastructure on the one hand, and research, technical and financial services on the other; and (c) a legal and institutional system that provides the policy framework for regulation, coordination and management of the sector.

Fig. 2.2 Simplified Agricultural System (Uganda)

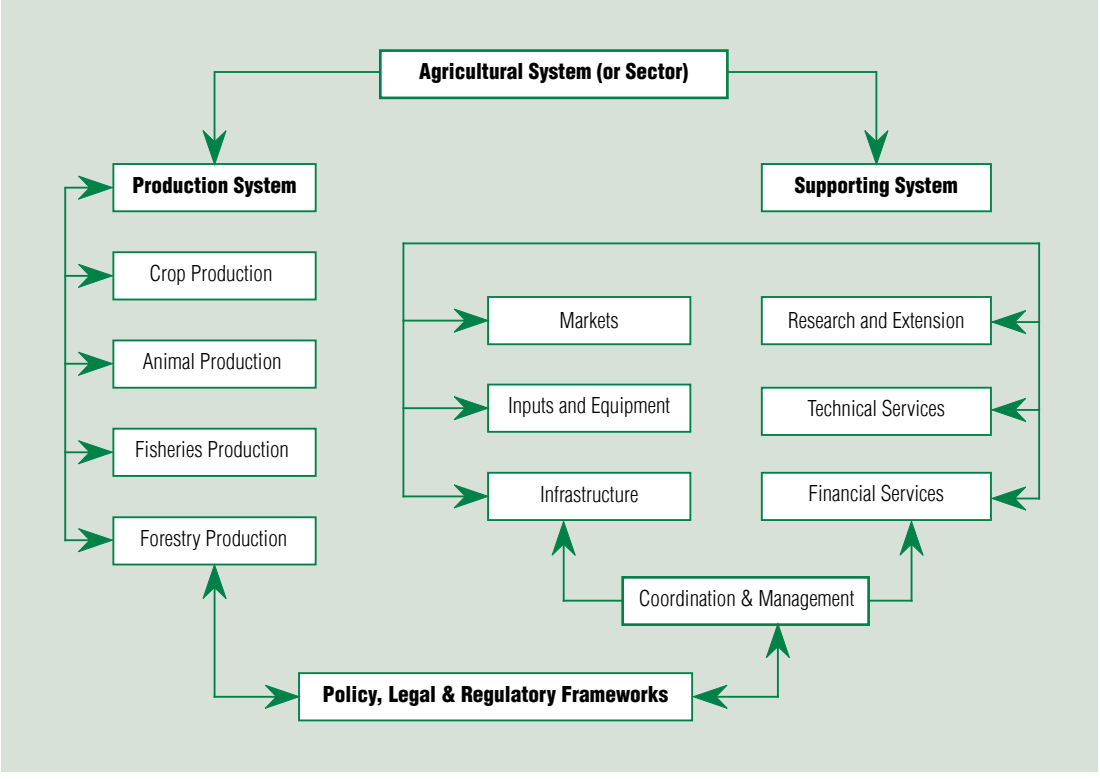


Fig. 2.2 illustrates the global situation of the agricultural system and the interactions of the three main sub-systems. Each of the variables can be expanded into a complex of sub-systems, and it is the performance of these variables (or sub-systems) that must be measured for impacts on rural and human development. The changes in these variables (e.g. production) can have both direct and indirect impacts on human development, depending on the size of the agricultural and rural sector in the overall economy. Thus, for instance:

- increased crop, animal, fishery and forestry production can have a direct impact on consumption and nutrition as producers' per capita output rises, and vice versa;
- but the impacts on incomes and well-being of the producers may not be obvious, as this will partly depend on the efficiency of the distribution mechanisms, and especially of markets and prices; and
- for impact to be positive both the production and supporting systems must function optimally, which in turn depends on the policy, legal and institutional framework in place; thus, technical, economic and financial advances in production cannot take place without strong institutional and infrastructural support.

It can be concluded from this broad conceptual discussion that agricultural production performance (crops, livestock, fisheries and forestry) has to be measured in terms of productivity of the factors of production – land, labour and capital. The level of agricultural productivity that is achieved by producers, however, depends on the effectiveness and efficiency in the operation of markets for both inputs and outputs, and the adequacy of infrastructure, research, technical and financial services. These constitute the cornerstone for analysing agricultural performance, and its link to rural and human development.

Similar to the HDI, one could suggest the construction of an Agricultural Performance Index (API) using these variables, that would demand a complex of data and a measurement technique that would need to be nationally defined and agreed upon, and would require international harmonisation and approval. The API would assist governments and implementers of agricultural programmes and projects to assess their contribution to rural development and poverty reduction. Meanwhile, it is proposed that the computation of API would comprise the weighted measures of:

i) physical potential – as measured by levels of land fertility, rainfall (amount and distribution);
ii) availability and accessibility of markets, as measured by commercial sale levels of key agricultural commodities; physical markets; rural trading centres; number of traders and transporters;
iii) level of technological achievements (innovations) as measured by use of improved seeds and other modernising agricultural technologies; and
iv) level of human effort, as measured by organisational and institutional development effort; application of labour; returns to factors of production (land, labour, capital); etc.

2.3 Rural Development

Agriculture constitutes the most significant (and usually also the most important) component of the rural sector in the developing countries, Uganda inclusive. The performance of the agricultural sector, therefore, directly impacts on the rural sector as a whole because it employs a large population and utilises considerable rural resources especially land and labour. However, the concept of rural development is much wider, and includes agricultural and non-agricultural activities. The concept involves a process that aims

at reducing rural poverty and improving living standards through sustainable and broad-based growth and investment in people. The process is not just the activities in rural areas, but the outcome of the joint actions and interactions of rural people, their national and local governments, the private sector, civil society organisations, and development partners. The process of rural development covers rural communities and how they can generate incomes based on their livelihoods with technical support from state and non-state actors. Sustainable rural development is an endogenous process as it generates the drivers of sustainability.

The planning of rural development requires a set of approaches and strategies that are broad-based and recognise the importance of social and traditional settings in rural societies. In Uganda, for instance, poverty is pervasive throughout the rural areas. Poverty reduction efforts are therefore at the centre of rural development strategy in Uganda. However, poverty reduction in the rural areas cannot be the sole measure of rural development. Moreover, poverty is a complex and multi-dimensional phenomenon, varying with location, age, gender, and existing levels of services and infrastructure, among other factors. A Rural Development Index (RDI), which measures performance of rural development, requires a complex of indices encompassing both agricultural and non-agricultural dimensions and indicators. RDI should be recommended for future reports. The effort to construct such an index is multidisciplinary and multi-sectoral and thus entails several data sources and a measurement technique that would need to be nationally defined and agreed upon, and would require international harmonisation and approval.

2.4 Human Development

According to UNDP, the human development paradigm rests on an overriding commitment of several core principles: the expansion of human choices to improve human development; the role that the people themselves, especially the poor, must play in bringing about change in their lives as well as a process that places people at the centre of development, valuing expansion of choices and increase wellbeing as both a means and an end in themselves.

Fundamental to enlarging human choices is building human capabilities – the range of things that people can do or be. The most basic of these capabilities are leading a long and basic healthy life, being educated as well as having access to the resources needed for a decent standard of living. There may, however, be other capabilities that have grown in importance over time, or are specific to different parts of the world. Human development is, therefore, not a "closed box", but rather an evolving process and perspective.

The 2002 Global HDR, which placed emphasis on promoting participation through democratic governance, offered further reflection on the capabilities of political freedom and participation. The report noted that since the first HDR in the early 1990s, political freedom and participation have become much more prominent in public policy debates and that the political shifts of the 1990s have built greater consensus on the value of political freedom and human rights. Both political freedom and ability to participate in the life of one's community are now regarded as capabilities that are as important for human development as being able to read and write and being in good health. People without political freedom have far fewer choices in life.

In summary, human development involves the process of widening people's choices and the platform for making such choices, especially through expanded human capabilities (UNDP, 2002). The lack of opportunities to widen one's choices and increase productivity is one of the main factors retarding human development. Widening people's choices enables the development of their full potential in order to lead productive and creative lives in accordance with their needs and interests (UNDP, 2001).

In measuring human development, emphasis is placed on the ends rather than the means of human progress. Consequently, human development is about people, about expanding their choices to live their lives in full and about their creative lives with freedom and dignity. The adoption by the UN General Assembly of the UN MDGs as a human development agenda for improving human lives underscores the fact that development is about people and the opportunities they have in life rather than just about national economies and incomes. While economic growth, increased trade and investment, technological advances, etc. are all very important, they are means and not ends to human development. In fact, depending on the degree of vulnerability and deprivation, it is normal to have two different countries (See Box 3.1) with the same GDP per capita, while at the same time having different levels of human development, especially if income inequalities are high. Therefore, economic growth, which is measured by such variables as per capita income, while necessary, is not sufficient to measure human development. Other factors including life expectancy, literacy and quality of life, which are the most critical ends of the development process, have to be considered.

2.5 Gender and Human Development

Since human development entails, among others, embracing human rights, participation, security, political freedom and self-respect as well as considering the inextricable link between gender and agriculture, the integration of gender equality and women empowerment measures are key aspects in human development. In addition, gender equality is intrinsically related to all other human development goals embedded in the MDGs.

Integrating gender in human development therefore addresses the basic structure of inequalities in the socio-economic relationship between men and women. Women's empowerment enables women to participate equally with men in the development process in order to overcome obstacles to the achievement of equality. Critical to women empowerment is the full equal enjoyment by women and men of all human rights, which form an integral part of universal human rights and the eradication of all forms of discrimination on the basis of sex.

Gender Development Index (GDI) reflects the inequalities between men and women in terms of a long and healthy life, functional literacy and a decent standard of living. On the other hand, the Gender Empowerment Measurement (GEM) captures gender inequalities in terms of their political participation and decision-making power over economic resources as measured by women's and men's estimated income. GEM and GDI are necessary to enhance our understanding of the gender relationship pertaining to agricultural and rural development. The full participation of women and men as well as equal access to and utilisation of productive resources is paramount in achieving food security and increasing agricultural productivity (FAO, 2004).

2.6 Environment and Human Development

Environment and natural resources refer to those resources that are useful for human survival and are often obtained/ extracted from nature to provide for people's livelihoods. Poor people's perception of the environment is expressed in terms of their physical surroundings (sanitation, health facility, drainage, shelter/housing, and waste disposal) and the state of their environment and natural resources (land, water, forests, etc) but also in terms of environmental services. The environment provides basic needs, which contribute to human development and peoples' well-being in terms of food security, employment, health and safety nets.

Poverty eradication and economic development is not possible without good health. Likewise, the health of the population cannot be sustained without responsive health systems and a healthy environment. This close relationship between the environment and development as well as the need to improve health in order to achieve sustainable development is acknowledged by various global agendas on environment and the Uganda Environment Management Policy of 1994. It is therefore important that the poor have secure access to and utilisation of these resources; and poor people's capacity need to be strengthened in order to sustain the ecosystem.

The MDGs, which are now generally accepted as a framework for measuring development progress, focus on the efforts of the international community in achieving significant and measurable improvements in people's lives. In the case of the PEAP, environment and natural resources is central to achieving the rest of the MDGs in Uganda. For example, eradicating extreme poverty and hunger is linked to modernisation and commercialisation of agriculture, which cannot be achieved in a degraded environment. Likewise, reduction in child mortality will be more achievable if households have access to adequate clean water supply and sanitation facilities. Climate change will lead to the spread of vector born diseases and increase the likelihood of natural disasters. These disasters will, in turn, reduce income, destroy infrastructure and undermine investments in education and health. Consequently, achieving the MDG on environmental sustainability is central to achieving the other goals as well as all the pillars of the PEAP.

2.7 HIV/AIDS and Human Development

While HIV/AIDS was initially perceived as a health problem, it is increasingly becoming a development challenge undermining human development with far-reaching negative effects on economic and social sectors. The impact of HIV/AIDS on human development is reflected in the reduction of life expectancy rates especially among the economically active age group.

The effect of HIV/AIDS is felt more in the labour-intensive sectors such as agriculture. It exacerbates existing obstacles to production and food security with a different impact on gender according to their role in the household and community. The resultant sickness and death of working adults affects labour supply and its division between adults and children as well as between women and men. In Uganda, the epidemic is still a cause of morbidity and mortality, reducing agricultural workforce productivity, perpetuating rural poverty and reducing life expectancy. HIV/AIDS has also exerted a negative impact on the education sector responsible for poor performance, school drop out and absenteeism as well as lack of teachers due to HIV/AIDS related illness and death. To achieve the human development goals, it is imperative to understand and mitigate

the causes and consequences of HIV/AIDS and its impact on agricultural activities.

2.8 Sectoral, Regional and Functional Distribution of Pro-poor Growth

Poverty reduction strategies should address the sectoral, geographic, and functional distribution of economic growth. This is especially so considering the multi-dimensional nature of poverty (UPPAP 2002), and considering that in Uganda, the poor are not spread evenly throughout the economy. Furthermore, it is clear that pro-poor growth that directly reduces poverty must be in sectors where the poor are and use the factors of production they possess. The majority of the rural poor depend on agriculture for most of their livelihoods, and they live in regions where arable land is scarce, agricultural potential is low, and drought, floods, and environmental degradation are common. Access to basic human needs – education, portable water, health care, and sanitation – is far less available.

In addition, the problems of malnutrition, low life expectancy, and high infant mortality rates are more severe in rural areas. This phenomenon is especially significant in northern Uganda where a large proportion of the population has been displaced and cannot fully engage in agricultural production. The effort to ensure adequate growth of Uganda's agriculture, in general, should be directed to regions where agricultural production is depressed and should be targeted at those who are intended to receive the associated income. Only if more rapid agricultural growth occurs in those economically depressed regions of the country with impoverished rural populations, can rural farm and non-farm incomes rise sufficiently to enable improvement in the human development indices. And, only if the rural small holder farmers are well equipped and empowered to participate in agricultural growth, will rural poverty reduce and wages for unskilled labour rise and consequently lead to poverty reduction, which is the trigger to improved human development indices.

2.9 Poverty Reduction and Human Development

The GoU development strategy puts human development as the ultimate indicator of poverty reduction and economic development. The strategy regards social investment spending on water, health and education sectors as pivotal to reducing mortality and morbidity as well as for increasing employment and labour productivity. Besides the health and education outcomes, human development approach, which puts the people at the centre of development, also emphasises the need for economic growth and sustained poverty reducing employment and growth in order to eradicate extreme poverty and hunger. The human development approach borrows much from the sustainable livelihoods conceptual framework, which propounds poverty-focused development activities that are people-centred, participatory, holistic and sustainable (DFID Sustainable Livelihoods Framework, 1992).

In the case of Uganda, linking the human development framework to agricultural and rural development implies enhancing rural farmers' capital assets - natural, physical, financial, human and social. This is expected to contribute to increasing household productivity and incomes and consequently improving quality of life, food security, gainful employment, and sustainable use and management of natural resources.

The growth of non-farm economic activities further enhances human development. This growth of non-farm economic activities is closely linked to high levels of adoption of agricultural technology hence an improved human development.

3

AGRICULTURE AND HUMAN DEVELOPMENT PERFORMANCE

CHAPTER 3

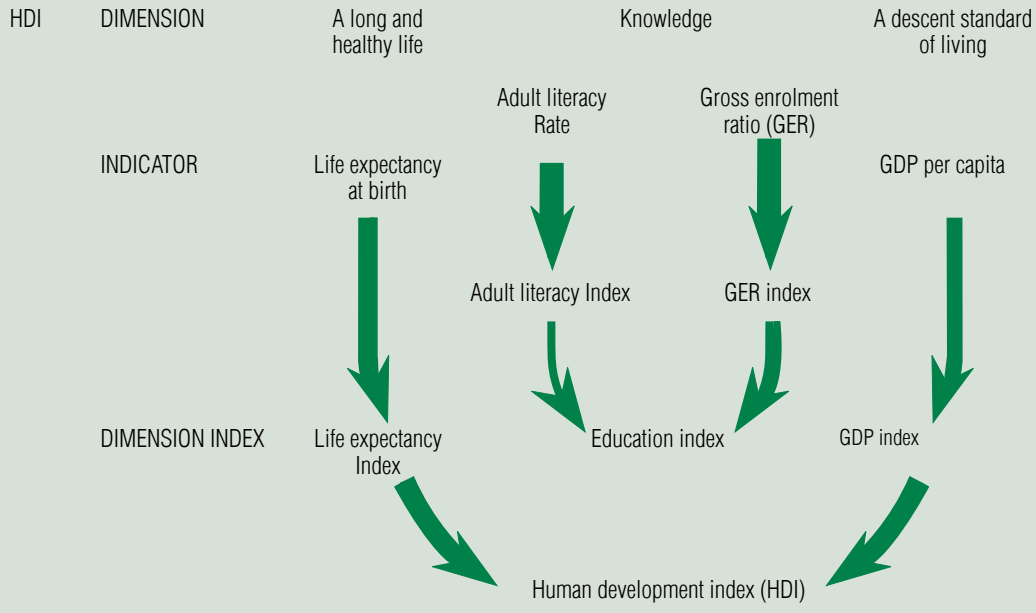
AGRICULTURE AND HUMAN DEVELOPMENT PERFORMANCE

3.1 Human Development Index (HDI)

The HDI is a measure of the overall human progress in a more holistic manner with special emphasis on living a decent life. It is a composite index embracing longevity (measured by life expectancy, representing a long and healthy life); knowledge (measured by education attainment) as a composite indicator combining adult literacy and gross enrolment in the ratio of two-thirds and one-third, respectively; and a decent standard of living, (represented by GDP per capita measured in terms of purchasing power parity – PPP). These three components capture the ends of the development effort: Life expectancy index, Education index, and GDP index, which are all weighted by 1/3 to derive the HDI. This is illustrated in Fig. 3.1 below and further elaborated in Box 3.1. HDI of a country or region denotes attainment of human development on a maximum possible value of 1.

Since its formulation, HDI has undergone some improvements particularly in 1999 HDR, in the areas of methodology as well as data series such as the discounting of income, new and improved data for life expectancy as well as educational variables.

Fig. 3.1 **Computation of HDI**



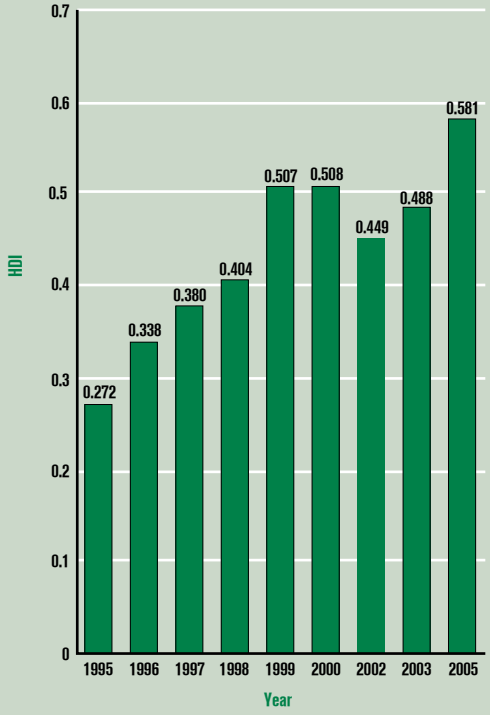
Box 3.1 The Human Development Concept

Human development is defined as the process of enlarging people's choices and widening the platform for making such choices especially through expanded human capabilities. Lack of opportunities to widen one's choices and increase productivity is one of the main factors retarding human development. To measure human progress more accurately, emphasis is put on the ends rather than the means of human progress. The most critical ends of development have been identified as i) a long and healthy life, ii) education and iii) a decent standard of living. The link between the "means" and "ends" of human development is not automatic.

Developing on the degree of vulnerability and deprivation, two different countries could have the same GDP per capita and yet have very different levels of human development, especially where income inequalities are high. For example, while growth could be measured by such variables as per capita income, to measure human development considers other factors including life expectancy, literacy levels and quality of life. For instance, in 1997 both Lesotho and Morocco had similar HDI values of 0.582, while their real GDP per capita or purchasing power parities (PPP$) were 1860 and 3310 respectively (HDR 1999p. 129).

Source: Uganda Human Development Report 2002

Fig. 3.2 Human Development Index 1995-2005



3.1.1 Trends in Human Development Indices

The HDI for Uganda has been measured by UNDP since 1995 and, as noted in Fig. 3.2, it has been progressively improving since then up to 2000 when it reached a level of 0.508. It, however, declined in 2002 to 0.449, and then rose to 0.488. Using the information shown in figure 3.1 and formulas shown in Annex A, the 2005 HDI was estimated at 0.581 showing another improvement. There are several factors that could have attributed to this improvement in HDI as discussed below.

3.1.2 Role of the GDP per Capita in HDI

Since the decent standard of living of a person as measured by GDP per capita (PPP) is one of the major components of HDI, it is important to look at its trend over the years.

Per capita GDP was noted to be growing despite negative impact of increasing population as shown in Fig. 3.3. (IMF 2006; UNDP International Human Development Report 2007). The GDP per capita

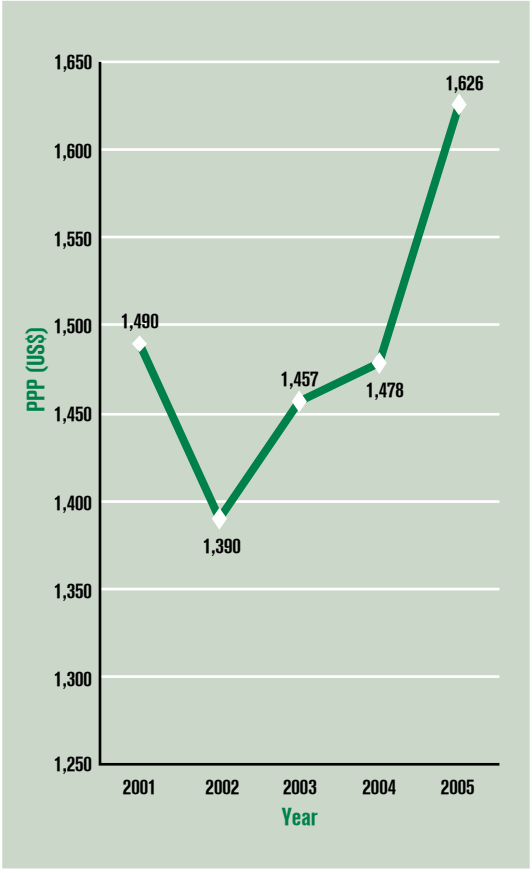
Table 3.1 Data used in Computation of the 2005 HDI

Index variable	Base value	Min	Max	Index value
Life expectancy (Years)	50.4 years (UBOS 2002 Census)	25 (HDR 2002)	85 (HDR 2002)	(LEI) 0.0.42
Adult Literacy (%)	69 (Uganda National Household Survey Report 2005/2006)	0 (HDR 2002)	100 (HDR 2002)	(ALI) 0.69
Gross Enrolment (%)	118 (Planning Unit MoES 2005/2006 and National Household Survey 2006 UBOS) For 6-24 old people	0 (HDR 2002)	100 (HDR 2002)	(GEI) 1.18
GDP per capita	PPP 1,626 US$ (2,777,208 Ugshs)	100 US$ (HDR 2002) (170,800 Ugshs)	40000 US$ (HDR 2002) (68,080,000 ugshs)	(GDPI) 0.466

measured in terms of PPP had improved from US$ 1,390 in 2002 to US$ 1,457, US$ 1,478 and US$1,626 in 2003, 2004 and 2005 respectively. It is important to note a direct relationship between GDP per capita and the HDI. Both the GDP per capita (US$1,390) and HDI (0.449) were lowest in 2002 and both highest in 2005 (HDI- 0.581 and GDP per capita - US$1,626). Therefore, any improvement in a country's GDP per capita has a direct positive impact on the HDI of a particular country.

Since the level of GDP per capita is used to measure the attainment of a decent standard of living of a person, this explains and also further confirms why GoU has put a lot of efforts in raising the levels of the GDP per capita in rural areas in fighting poverty.

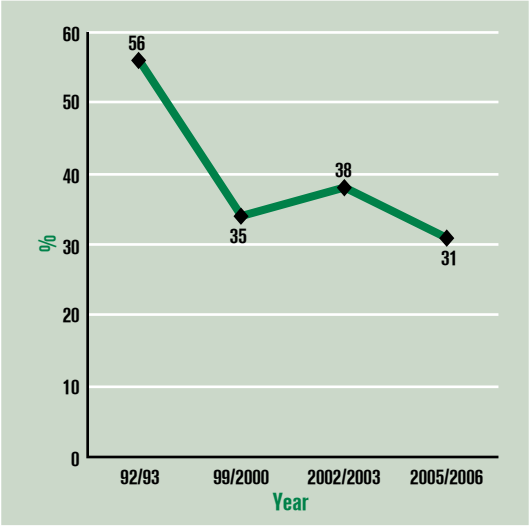
Fig. 3.3 Trends in GDP per Capita (Purchasing Power Parity –PPP US$)



Source: Poverty Status Report 2005

Indeed, Uganda has made tremendous strides in the poverty reduction effort. In 1992/93, 56 per cent of Ugandans were living below the poverty line, and this proportion fell to 35 per cent in 1999/2000. Though this proportion increased to 38 per cent in 2002/03, it again declined to 31 per cent in 2005/2006 as shown in fig 3.4. These positive results in the government's efforts to fight against poverty further confirm the outcome of an improved HDI. A big gap was identified in poverty levels between rural (42%) and urban (12%)[12] areas while in general about 31.1 per cent of Ugandans are still living in abject poverty.

Fig. 3.4 Proportion of Ugandans living below the poverty line over the years



Source: UBOS, UNHS 2007

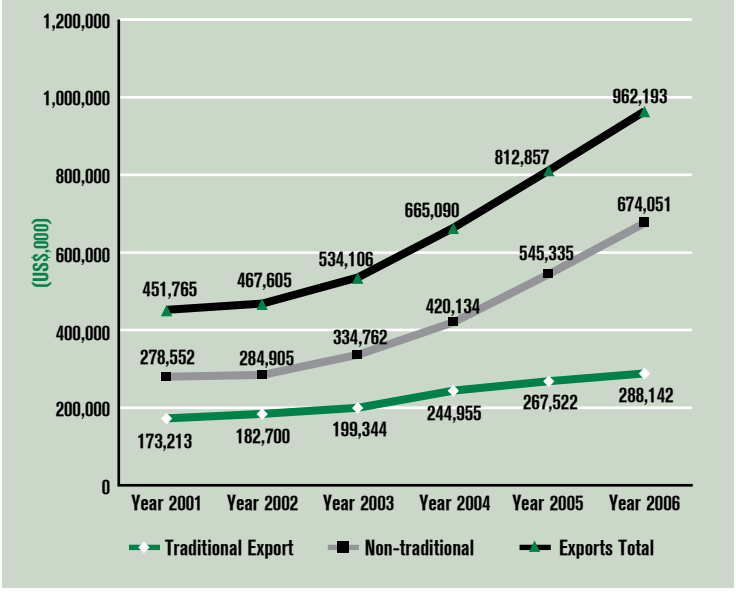
In order to better appreciate the theme of this report "Rediscovering Agriculture for Human Development," it is important to look at the performance of agriculture and rural development. Indeed, there have been efforts to diversify Uganda's export markets and some products have successfully penetrated the global market. International markets have proven important for the country's fish, horticulture and other high value crops e.g. spices, essential oils, fruits and nuts, vegetables and flowers, while regional markets have become increasingly important for the traditional crops such as maize, beans,

12 National Household Survey 2005/06

bananas, including dairy products. It is true that the small poor rural farmers could benefit from the regional markets if they are supported in their production and marketing efforts. Unfortunately, the country's physical infrastructure to exploit the regional markets is presently not well developed, and consequently the chances of getting out of poverty for the rural masses, who are predominantly engaged in producing traditional crops, remain elusive (See para1.1).

Progressively, the non-traditional exports (fish, roses and cut flowers, maize, cocoa beans, beans, other legumes, etc) have overtaken the traditional exports (coffee, cotton, tea and tobacco) as shown in Fig 3.5 and Table 3.1A Annex A. If the production of non-traditional exports is strategically encouraged among the rural poor that have comparative advantage of producing them without undermining the traditional exports (coffee, cotton, tobacco, etc), and clearly work on the physical infrastructure to improve the marketing channels to enable the producers exploit both international and regional markets to get maximum profit, then poverty at household level can be systematically addressed.

Fig 3.5 **Uganda Exports**

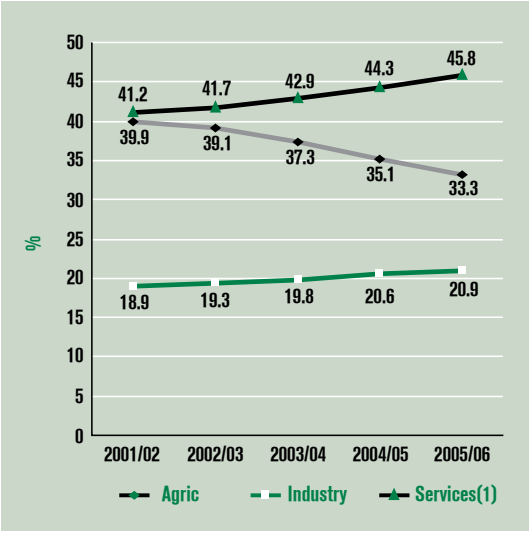


Source: Statistical Abstract 2006 and 2007 (UBOS)

Furthermore, the monitoring processes have highlighted the poor performance of the agricultural sector again and especially the crop sub-sector with the ultimate result that 45.2 per cent of the rural poor) of the people living below the poverty line in 2003 were crop farmers, which increased to 53.1 per cent in 2005/06. This is partly attributable to prolonged droughts, loss in soil fertility and high incidence of pests and diseases and a reduction in farm size and agricultural land. Hence, in order to rejuvenate the performance of this sector as a means of further enhancing stable household incomes and food security, these constraints need to be addressed.

Despite the improvement in GDP and the increase in the agricultural exports for both traditional and non-traditional crops, there has generally been a decline in the growth rate of the agricultural sector and its overall contribution to GDP as reflected in Table 1.10 and Fig. 3.6. In the mid 1980s, the agricultural sector's contribution to GDP was over 60 per cent, but fell to 51 per cent in 1991 and further dropped to 34 per cent in 2005/06. Thus, while the national per capita income has continued to increase as shown in Fig. 3.3, this phenomenon is not a true reflection of the majority small rural farmers who are agriculture-based, and who are still engaged in producing traditional crops especially food crops. This has continuously affected the majority of Ugandans (72%) who are employed and draw their livelihoods directly or indirectly from the agricultural sector. Overall, one would have witnessed a much higher per capita income had the agricultural sector performance been on the increase than is the case. This in turn would have generated a higher GDP index and consequently improved the HDI even further.

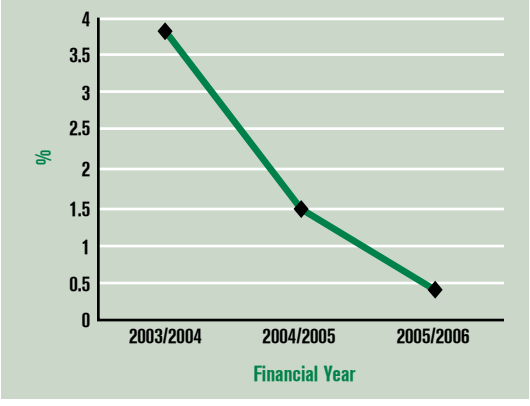
Fig 3.6 Sector Contribution to GDP at Basic Prices



MFPED 2006; Background to the budget for Financial Year 2007/08

The decline in the agricultural sector contribution to GDP, which had been growing at 5.5 per cent per annum in 2003/2004, is not necessarily purely true that the economy is shifting to non-agricultural activities, but rather that the sector's growth rate is declining without underscoring the fact that the service sector is rapidly growing. As shown in Fig. 3.7, the agricultural sector growth has since 2003/2004 continued to decline at a very high rate in real terms. The sector which was growing at 3.8 per cent per annum in 2003/4[13] declined to 1.5 per cent in 2004/5 and further declined to 0.4 per cent in 2005/06. It should be noted that this decline affected both crop and animal production.

Fig. 3.7 Trends in Agriculture Sector Decline in Uganda



Source: PEAP 2005/2006

The above phenomena is further confirmed by the agricultural sub-sector's GDP growth as observed since 1995 and reflected in the MAAIF Policy Statement No.1 of 2006 on the "Recent changes in agricultural output in Uganda". According to the MAAIF, the sub-sectors, GDP growth was as high as 5.8 per cent in 1998/99 and 1999/2000 but this declined gradually to 1.6 per cent in 2003/04 though it improved to 2.1 per cent in 2004/05. It was further observed that the food crops sub-sector has not performed as well as the livestock and cash crops' sub-sectors which have shown more consistent positive annual rates of growth.

Table 3.2 Agricultural Sub-sectors' GDP Growth, 1995/96 to 2004/05 (% in real terms)

	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
Cash crops	22.60	13.90	-2.00	9.30	7.00	-4.90	7.40	4.60	0.30	4.2
Food crops	1.30	-1.90	1.70	6.10	6.10	6.20	3.20	1.20	1.50	0.70
Livestock	9.80	5.70	4.10	4.30	3.90	4.40	5.00	4.60	1.10	5.30
Overall	4.30	1.20	1.90	5.80	5.80	4.60	3.90	2.30	0.4	0.5

Source: Statistical Abstract UBOS various

The above stated decline has been attributed to mainly drought conditions that negatively impacted on the performance of the sector, which is largely small-based and rain-fed. Hence, if Uganda is to attain the 7.0 per cent GDP growth rate target, the country will have to introduce further reforms and interventions directed at revamping the growth of the sector. But, as long as agriculture continues to grow at low rates, the pro-poor growth will continue to be elusive.

The improvements in the agricultural performance, say, through improved drought and disease/pest resistant crops that are economically viable as well as necessary infrastructure like access roads and market channels, and appropriate technologies that are locally manageable and sustainable, may help boost the sector's production. As evidenced by the

[13] 2003/4 is the baseline year for the PEAP 2004/08

improved incomes in Ruhiira village and St. Jude organic farm, it is possible to improve people's incomes, which in turn directly improve the GDP per capita hence HDI.

Field experiences show that strategies that improve agricultural production, productivity and farmers' incomes and hence rural development have to be cost effective, user-friendly in approaches and should be appreciated by the farmers. Such skills have been demonstrated at the St. Jude Integrated Farm in Masaka district and at the Ruhiira UN Millennium Villages Project, as shown in Boxes 3.2 and 3.3 respectively.

Box 3.2 St. Jude Integrated Farm

Photo: Improved banana plantation in Ruhiira Village (left), Organic farm in St. Jude, Masaka (middle photo), and a woman tending the tree nursery bed in Ruhiira village (right photo).

St. Jude Integrated Farm, was established in 1985, and started farmers' skills training in 1998. Currently the farm handles 18 projects on a 3.8 acre-plot, yielding Shs 50 million per year as gross income. The projects that are currently being implemented on this farm include: piggery, fish (catfish), banana, fruit drying, skills training, appropriate technology, poultry, dairy cattle, vegetables growing, pepper, organic manure, rabbits, goats, beekeeping, fruits, mushroom, local poultry, and bio-gas production.

The farm applies cost-effective technology through the growing of beans for nitrogen fixing bacteria; and the use of ash and animal droppings for compost manure. Wider community impacts of the farm include the knowledge and skills training adopted by the over 7,000 farmers from the neighboring districts of Sembabule, Rakai and Masaka with 2000 farmers practicing the knowledge and skills imparted from the farm. These farmers have been reported to have applied their newly acquired skills after returning to their respective home districts.

Box 3.3 The Ruhiira UN Millennium Villages Project

Launched in March 2006, the Ruhiira UN Millennium Villages Project has five thematic areas: a) agriculture and environment b) community health c) social infrastructure (water, rural energy) d) enterprise development e) community engagement. The community has benefited from the project through access to hybrid seeds and improved farming methods, clean water, health services, as well as treated mosquito nets.

The holistic project cost is US$110 per person per year ans is meant to run for 5 years. Contributions to the project is to be done in the following proportions US$50 – donors; $10 – community; $30 – GoU; $20 – other partners. According to the Cluster Manager, Dr. John Okorio, the community in the Ruhiira village is already contributing more than their share to the initiative.
The project utilises a communal action approach for infrastructure development such as opening access roads with jointly agreed governing rules of penalising the non-participants. During the study site visit, the community reported that a new value addition in the project approach is that of residents working together as one people for their common good as was witnessed in opening of community access roads and community water schemes.

The community access roads are critical in enabling installation, distribution and consumption of safe water. The water system is meant to pump

water uphill from the valley. The gravity water is accessed by residents of 19 Local Councils (5 cells lower side; 14 cells upper side) in the two sub-counties of Nakitunda and Kabuyanda.

The project has an innovative linkage with 18 beneficiary primary schools in the area. Prior to the project, academic performance of the participating schools was poor owing to among others, poor attendance, long distances and poor enrolment. In addition, the land tenure system constrained improvement on and expansion of school facilities to enhance learning. The project's school feeding programme includes provision of breakfast and lunch for both teachers and pupils. In the case of Omwichwamba Primary School visited by the Study Team, the feeding programme led to growth in enrolment from 518 pupils in 2005 to 583 in 2006, and to 638 pupils in 2007. In addition, this particular primary school, which had not recorded any first grade since inception, for the first time, passed some of their pupils in both first and second grades in Primary Leaving Examinations (PLE) during 2006.

In the water sector, the project has reduced the challenges associated with access to water sources to schools and communities. In Omwichwamba Primary School visited during the study, the 2 km-distance to a water point from the school is no longer an issue as the project has installed a roof water harvesting technology. At each of the 18 beneficiary primary schools, the pupils are sensitised on agricultural practices such as cropping methods, weeding, spacing, harvesting, among others. The schools' challenge is now post-harvest storage of the grain collection from nearby beneficiary farmers who each gives back 8 kgs of their crop harvest.

In the enterprise development sub-component, the project focuses on mobilising farmers to participate in decision-making on what viable projects they can engage-in, including development of market linkages. As a result, the farm-gate prices in the area have improved (e.g. the farm gate price for matooke has improved from Shs 2,000/= to Shs 5,000/= while that of maize grains has improved from Shs 180/= to Shs 340/= per kg). The spin-offs from improved farm-gate prices have triggered community savings mobilisation. This has motivated rural women to establish and manage a village bank whose membership stands at 230, with a share capital of Shs 60,000/= and a total savings portfolio of Shs1.8million.

It could be argued that the sudden shift from traditional export crops such as coffee and cotton, produced with limited technology and with already existing experience, to high value crops like horticulture and fish farming that require more capital, skill and improved technology that many rural Ugandans cannot afford has left the majority of rural population involved in production of traditional crops. Whereas there is a need to introduce such high value crops, commensurate efforts should be directed at both production and institutional support systems in order to increase household incomes and subsequently reduce poverty thereby improving HDI. These efforts may include revamping the cotton ginneries and making garments from the locally produced cotton as well as making instant coffee from the local coffee, among others. This would then have a more direct effect on the masses of rural poor than having

one big farm of flowers for one person in a county while the rest of the population stick to their traditional crops that may not impressively improve their income. Issues of environmental protection such as planting economically viable and environmentally friendly trees, soil fertility restoration and preservation technologies and disease prevention methods should be widely disseminated among the rural poor accompanied by policies that are easily implemented. For example, in early 1930's, all the Kabale farmers (for Kigezi) were required to practice contour farming a fact that helped reduce soil erosion on the steep slopes, a policy that worked until of late when most contours grew very old and eroded because they were not well maintained.

3.1.3 Contribution of Life Expectancy to HDI

The life expectancy for Ugandans has been improving over the years as can be seen in Fig. 3.9 below. Life expectancy for Ugandans stood at 50.4 years in 2005 having improved from 48.1 years in 1991. However, this average life expectancy is still lower than the average for Africa (52 years) and other developing countries (64 years).

Anecdotal evidence shows that like in many other parts of the world, women in Uganda tend to live longer than men (life expectancy in 2002 for males was 48.8 years, and 52.0 years for females). Besides the biological factors, other social-economic such as deaths in armed conflicts, traffic accidents, HIV/AIDS and alcoholism-related deaths influence the male life expectancy to be lower than that of females. It must, however, be pointed out that because of the feminisation of AIDS, a reverse trend is emerging in sub-Sahara African countries (see Box 3.4) such Kenya, Zambia, Malawi and Botswana where men have surpassed women in life expectancy. This is owed to the fact that women are more vulnerable as a result of biological and cultural factors. At the same time, women have limited access to information, reproductive health and treatment and, do not make decisions in sex matters especially regarding condom use. As a consequency, women suffer rape, defilement and domestic violence.

A gender perspective in the assessment of the life expectancy of Ugandans highlights the gender disparities in the health and well-being of the population. High death rates among working age males affect not only men, but women and families as well. For example, poverty rates among elderly widows tend to be very high as they can't provide food, reasonable shelter, education, health and vital social services to their dependants.

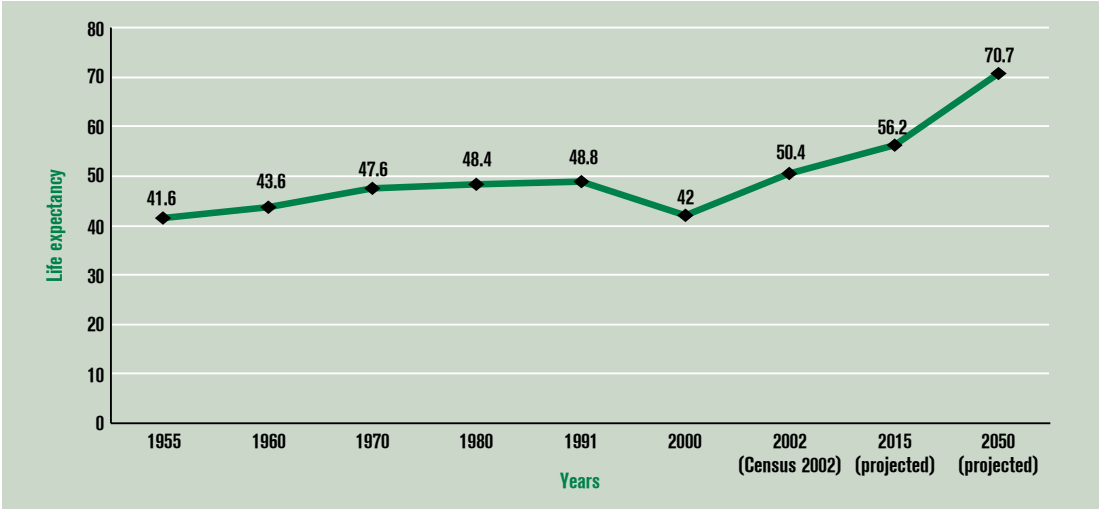
Box 3.4 Life Expectancy at Birth in Selected Commonwealth Countries

Country	Female	Male
Uganda	52.0	48.8
South Africa	48.2	45.7
Namibia	47.5	46.8
Kenya	46.5	48.5
Cameroon	46.2	45.1
Tanzania	46.2	45.6
Nigeria	43.5	43.2
Malawi	39.6	40.0
Zambia	37.1	38.2
Lesotho	36.2	34.0
Botswana	34.8	34.9
Swaziland	31.3	31.3

Source: HDR (UNDP)

Given that Life Expectancy Index (LEI) contributes 1/3 to the measurement of HDI, any improvement in this index has a direct bearing on the general HDI. The improvement in LEI may be attributed to many factors that have responded to the GoU efforts to improve the health sector.

Fig. 3.9 Life Expectancy Trend



The improvement of life expectancy may be attributed to improvements in infant mortality rate, which has been reducing (according to UDHS 2006, the infant mortality rate was 89 deaths per 1000 live birth in 2000-2001, which reduced to 83 as per 2002 census and further reduced to 76 in 2006, targeting 31 by year 2015).

Besides that, the government through the HSSP II and in collaboration with NGOs and the private sector is undertaking collective efforts to increase and improve the delivery of health services. Home-based management of fever has also been introduced, where free pre-packaged malaria treatment for children is provided.

The GoU in conjunction with several NGOs and the donor community has been encouraging the use of insecticide treated mosquito bed nets especially among the children and pregnant mothers (improved from 11 per cent in 2002/2003 to 17 per cent in 2006) as well as encouraging proper treatment of malaria whenever diagnosed. Despite all these efforts, malaria still poses a major challenge to health service delivery in Uganda since it accounts for about 50 per cent of the illnesses as seen in Table 3.3.

It has also been noted that there is an increase in the use of clinics (from 40% to 45%) between 2002/03 and 2005/06[14]. It is also evident that the majority of the population in Uganda (45%) sought medi-

Table 3.3 Population by Type of Illness/Major Symptoms by Residence

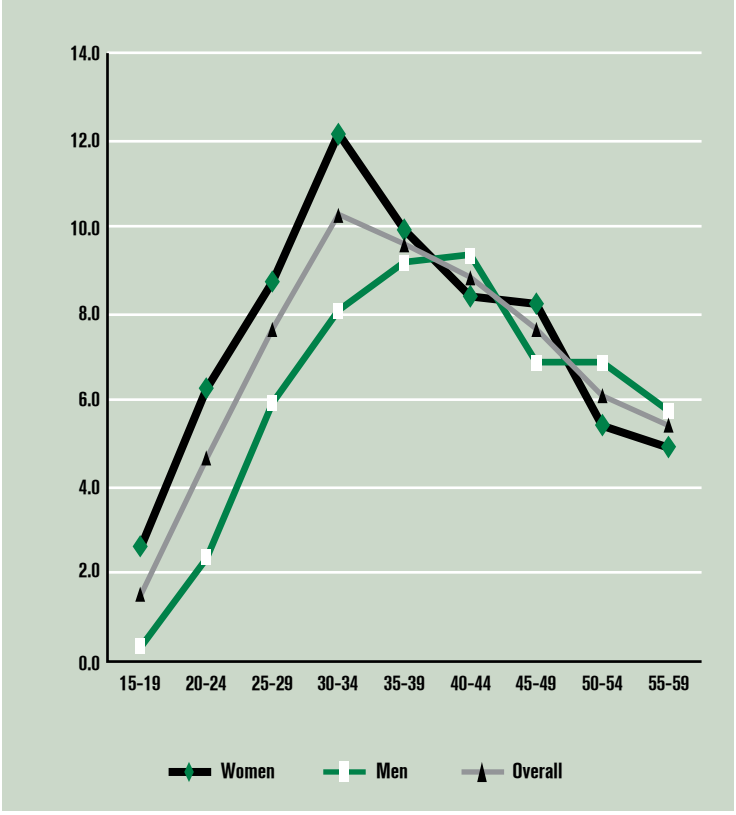
	2002/2003			2005/2006		
Illness	**Urban**	**Rural**	**Uganda**	**Urban**	**Rural**	**Uganda**
Malaria /fever	62.7	57.8	57.5	48.9	53.3	49.6
Respiratory infections	15.1	12.9	13.2	14.2	14.7	14.1
Diarrhoea	2.2	4.4	4.1	7.3	9.8	9.4
Injury	1.3	1.0	1.0	5.4	7.0	6.8
Skin infection	1.6	3.1	2.9	3.2	3.2	3.2
Others*	17.2	20.9	20.4	16.3	17.0	16.9

*Others include fainting, pain on passing urine, coughing blood, genital sores, mental disorders, child-birth related illness, serious headache and others
Source: 2005/06 Uganda National Household Survey Socio Economic Module

cal attention from clinics while 26 per cent went to health centers. The reasons why the population prefers private to government clinics are that health workers in private clinics offer better service and are willing to offer their services on credit. As a result of people moving to the private clinics, there has been an overall increase in the cost of health expenditures by an average 3 per cent at household level (4% in 2002/03 to 7% in 2005/06[15]).

All these efforts, including the encouragement to establish private health units all over the country have greatly improved the delivery of health services, which in turn, have improved the life expectancy of Ugandans. This does not underscore the GoU's achievements in fighting HIV/AIDS that has for the past years been responsible for the many deaths recorded in this country. The people aged 15-49 years that were HIV-positive were 6.4 per cent (7.5% females and 5.0 per cent males) while those aged 15-59 years were 6.3 per cent (7.3% females and 5.2% males). This reduction of HIV infection to a single digit has also contributed towards increased life expectancy.

Fig 3.10 HIV Prevalence by Sex and Age



Source: Uganda HIV/AIDS Sero- Behavioural Survey 2004-2005

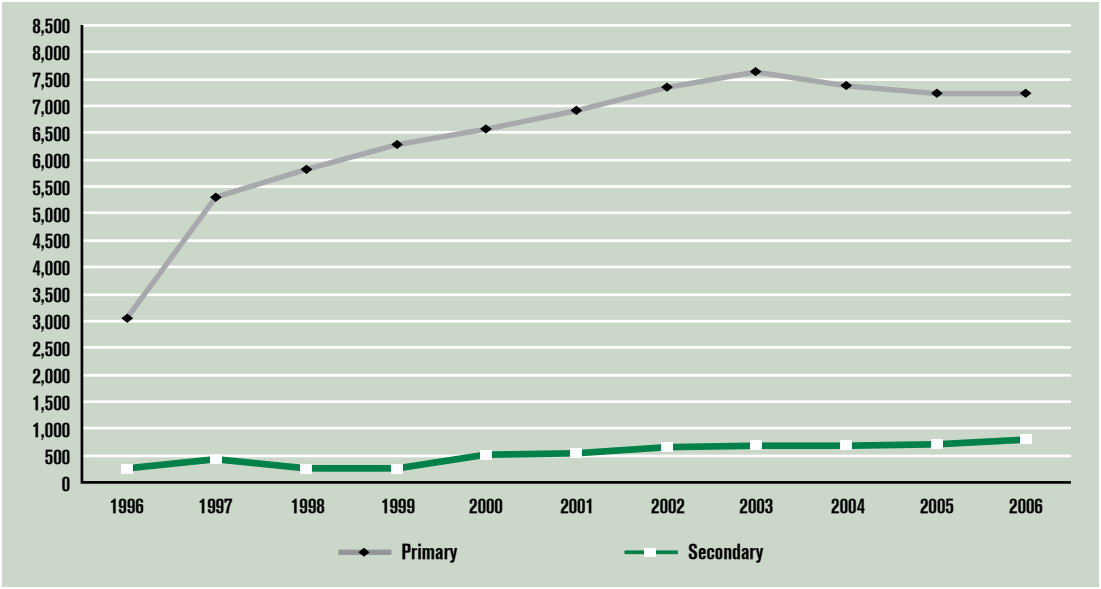
3.1.4 Impact of School Enrolment on HDI

Despite the fact that the HDI has shown an improvement from 0.488 in 2003 to 0.5812 in 2005, there has been a general decline in the primary school enrolment since 2004 as shown in Fig 3.11. This decline has in turn led to low levels of GER index, which in turn has negatively affected the general education index. Though low education index has not managed to push the 2005 HDI below the 2003 value, this could have hindered it from attaining even a higher level which would have been highly welcome.

Government, has since the introduction of UPE policy in 1997, steadily increased its share of budget support to primary schools through construction of new school classrooms using the School Facility Grant (SFG) scheme, as well as extending grant assistance to community and private schools in a bid to improve school-learning environment and to attract and retain children in schools. This has resulted in a steady increase in enrolment in primary schools over the years, from 6.6million in 2000 to 7.3 million in 2005 as shown in Figure 3.11. The annual percentage change in primary school enrolment was 4.3% in 2000, 5.2% in 2001, 6.6% in 2002, 3.8% in 2003 and -3% in 2004 and –2.1% in 2005. In absolute terms, the total enrolment reduced by over 400,000 pupils between 2003 and 2005, which number is not small and could not be offset by the increase in secondary school enrolment, which is very small. There is no clear explanation for the drop in enrolment since 2003.

14 Uganda Statistical Abstract 2006
15 UDHS 2006

Fig 3.11 Total Enrollment in Primary and Secondary School, 1996-2004



Source: UBOS Statistical Abstract, Various, include figures for 2006- 7,224,761

The above problem has been compounded by the high level of school dropouts. Only a very small proportion of children who are enrolled in P1 complete P7, a fact that affects the literacy levels and the overall enrolment as shown in Fig. 3.12. The key reasons advanced for the high dropout include, among others, the cost of education (other than what is covered by the UPE programme), indifference/lack of interest to attend, and sicknesses like HIV/AIDS of children and/or parents. In general, almost two thirds of pupils who enrolled in P1 are unlikely to complete P7.

Progress against MDG on gender equality and empowering women has been registered in the context of reducing inequalities in primary education. Owing to the affirmative action provisions, the gender enrolment gap narrowed as the proportion of girls in total enrolment in primary schools increased to 49% in 2004 from 44.2% in 1990, while at secondary level the enrolment has increased from 37.2% in 1990 to 45% in 2003 and to 46% in 2004. Gender inequalities in secondary education are still high but can be expected to decline with the advent of USE.

More girls than boys drop out mainly because of long distance, besides lack of interest, financial constraints, family responsibilities, sickness, early marriages and pregnancies as well as social-cultural bias that put the girl child at a disadvantage

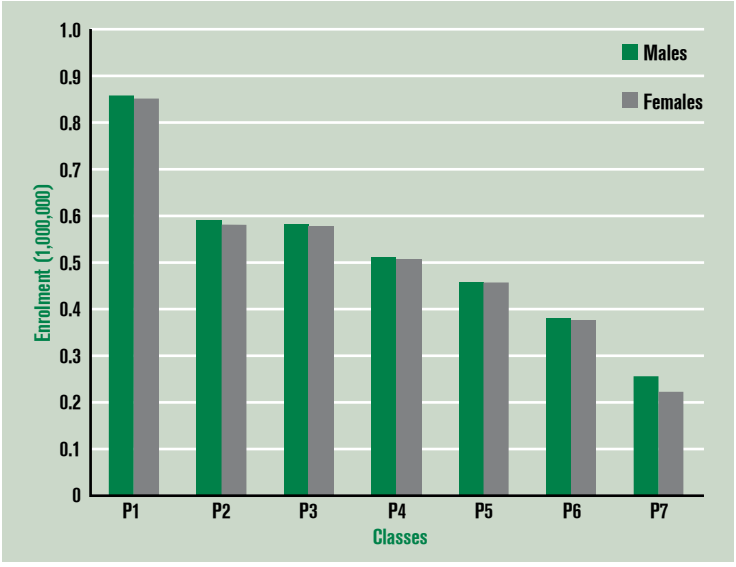
Box 3.5 Enrolment and Performance between girls and boys

According to the EFA report, girls literacy rate is now higher that that of boys; literacy amongst girls in primary 3 rose from 35.5% in 2003 to 40% in 2005 and 46.0% in 2006 against the boys with 33.1% in 2003, 37% in 2005 and 44.2% in 2006. Among the primary 6 pupils, the literacy for girls stood at 36.6% against boys 33.4% in 2006. However the performance of boys in numeracy (mathematics) is higher than those of girls, in-spite of girls increased enrolment to science courses at Makerere University, for instance, which increased from 10% in 2003 to 45% in 2003. (Education for all, EFA, 2007) in education Vision, May , 7th 2007)

Before the introduction of USE in 2007, only a small proportion of those who would complete P7 were able to join secondary education. The low total enrolment in secondary schools of 728,562 (Gross enrolment rate - GER stood at 18.8% in 2005;

males 55%, females 45%) to majority of whom were in lower classes, thereby signifying a high dropout rate. The reduced school enrolment that was experienced since 2004 had a negative impact on the National HDI. Since the Education Index is composed of the general enrolment and literacy indices (see Section 3.1), the effect of a drop in primary school enrolment could have been neutralised to some extent by the increase in secondary school enrolment (see Fig. 3.10) and improvement in literacy levels (adult illiteracy was 32.3% in 2003 and 30.8% in 2005), all of which are reflected in a reasonably high CEI (0.85). Hence the HDI is still higher than the 2004 value.

Fig. 3.12 Enrolment by Gender and by Grade of Primary School, Year



Source: Ministry of Education and Sports -2006

3.1.5 Regional and District Level HDI

Fig. 3.13 compares the human development performance of each region with the national HDI, and how each region performed in 2005 as compared to 2003. The central region had the highest HDI of all other regions both in 2003 (0.547) and 2005 (0.650), while the northern region had the lowest HDIs of 0.418 (2003) and 0.499 (2005). The western region came third to the central region with its indices standing at 0.487 and 0.564 for 2003 and 2005 respectively. The eastern region was ranked second in 2003 with HDI of 0.459, showing an improvement in 2005 with its HDI standing at 0.586.

The best performing districts were Kampala and Wakiso in the central region; Kabale, Rukungiri and Ntungamo in the western region; Kapchorwa and Jinja in the eastern region; and lastly Arua and Moyo in the northern region. Districts with the lowest HDI were mainly in northern region especially in Karamoja area. The low level of HDI in the northern and eastern regions is attributed to the insurgency that forced people to relocate to safe areas with fewer opportunities to participate in economically productive activities. These districts also had poor enrolment ratios in addition to high infant mortality rates.

Fig. 3.13 HDI by Region (2003 -2005)

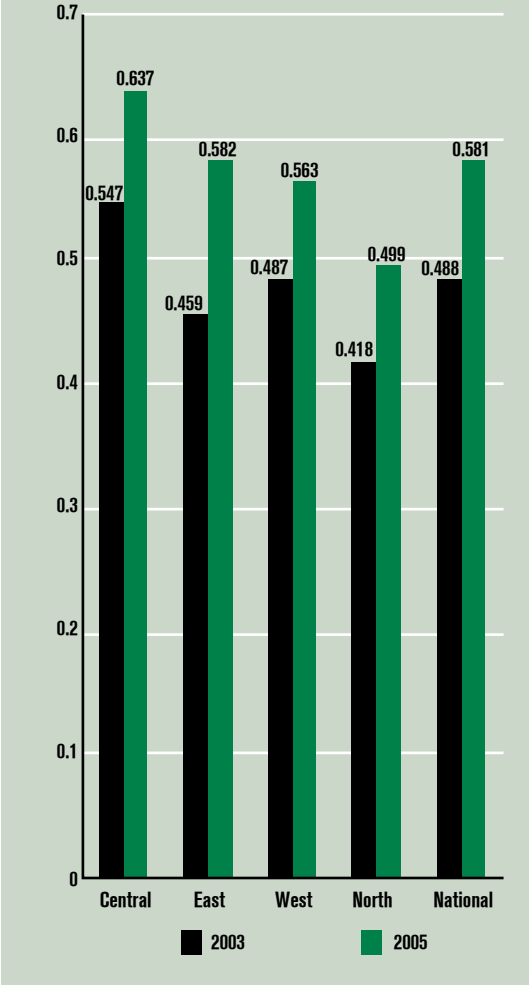
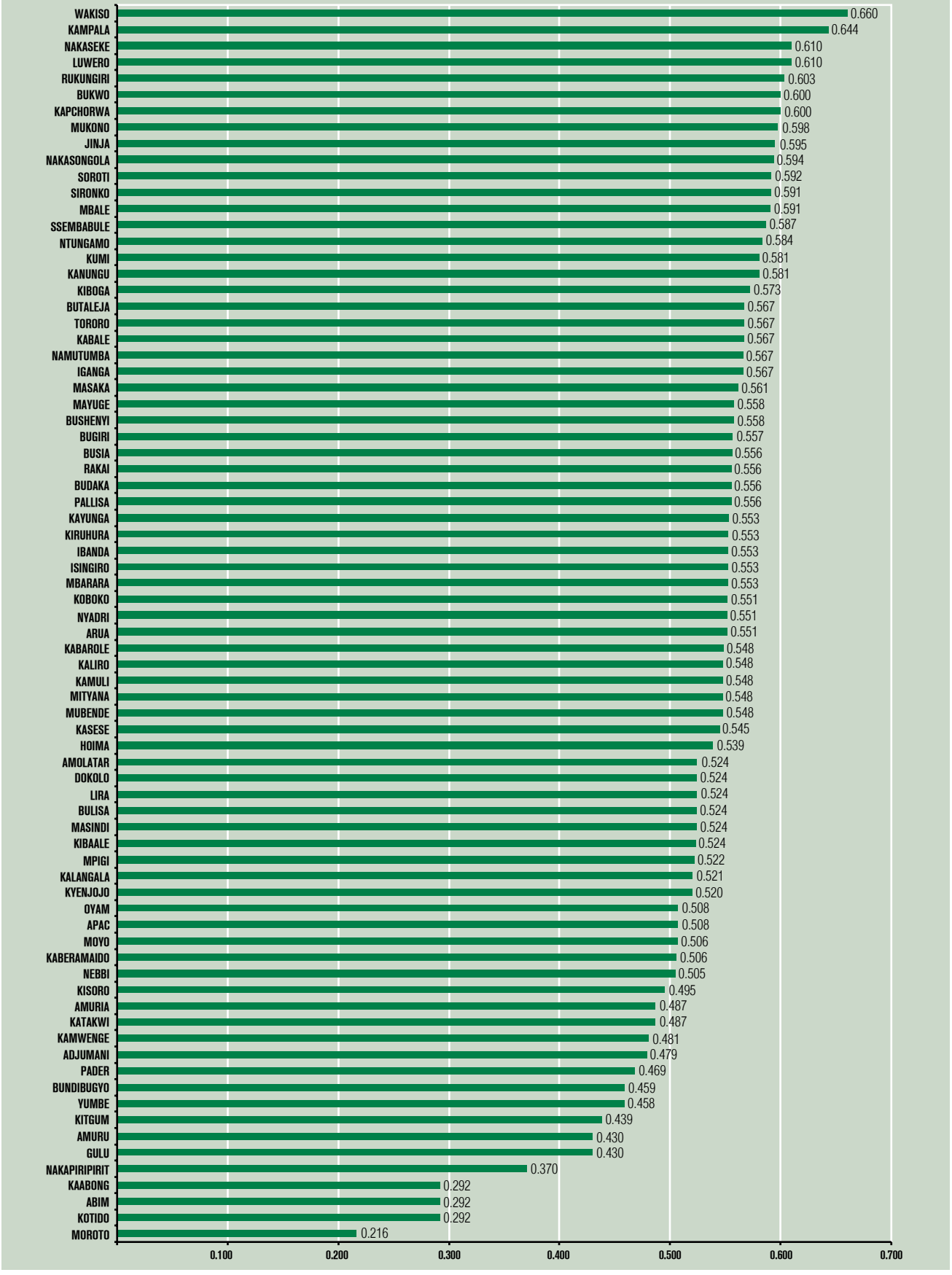


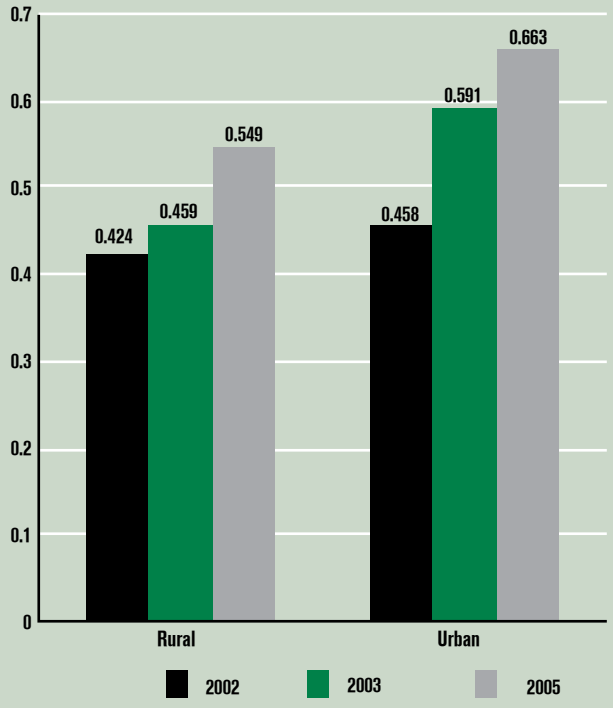
Fig. 3.14 **HDI by Districts**



3.1.6 Rural and Urban HDI

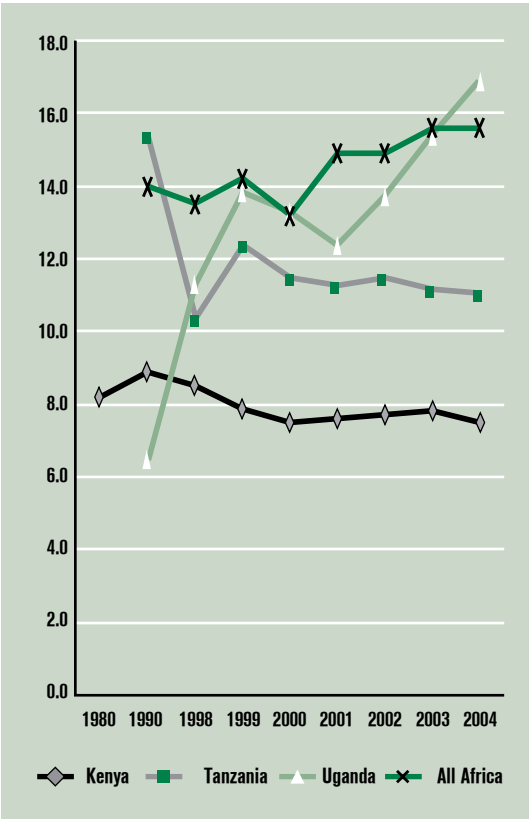
The HDI for 2002, 2003, and 2005 (Fig. 3.15) was higher for the urban dwellers (0.663) than for the rural areas (0.549). Looking at the major components of the HDI namely the Combined Education Index, Life Expectancy Index and GDP per Capita Index, the rural areas are not scoring poorer than the urban areas. This explains the consistent differences in the 2002, 2003 and 2005 rural/urban HDI. In addition to the above factors, the economy has received major private sector investment, which has been more attracted to urban areas because of the existence of better infrastructure and other services. This has kept the gap between the rural and urban areas wide in terms of their HDIs.

Fig. 3.15 HDI by Rural/Urban Classification (2002, 2003 and 2005)



It was noted during the PEAP review that Uganda's sound macro-economic management had resulted in controlled inflation, and maintained supportive economic conditions for private sector-led economic growth. These include, among others, competitive exchange rates for exporters, steady growth in private sector investment, low and stable interest rates and credit growth for the private sector. This has so far worked well for Uganda's economy, as shown in Fig. 3.16 where the private sector in Uganda has a large share of GDP than other East African countries. The unfortunate aspect, however, is that private sector investment has been more attracted to urban than to rural areas. This has further widened the gap between the rural and urban areas as reflected by their HDI. In order to bridge this gap, the government needs to invest and build infrastructure and provide other social services in rural areas in order to attract private sector and NGOs, involvement in such areas. Also, further involvement of NGOs into the rural areas will help provide services such health, education and improved agriculture productivity hence incomes, which may positively influence people's lives thereby bridging the rural/urban HDI gap.

Fig. 3.16 Private Sector Fixed Capital Formation % Share of GDP



Source: Africa Development Indicators 2006 (World Bank)

3.2 Human Poverty Index (HPI)

Whereas the HDI measures achievement in human development, the Human Poverty Index (HPI) measures deprivations in the three basic dimensions of the HDI:

- A long and healthy life (being vulnerable to death at a relatively early age as measured by probability at birth of not surviving to age 40);
- Knowledge (being excluded from the world of reading and communication as measured by adult illiteracy rate); and
- A decent standard of living (being lack of access to overall economic provisions as measured by the un-weighted average of two indicators, the percentage of the population without sustainable access to an improved water source and percentage of children under-weight for age).

The computation of HPI is summarised in Fig. 3.17. The closer the index is to 0, the better the progress, indicating the absence of human poverty, while the closer it is to 100, the more deprived the population is.

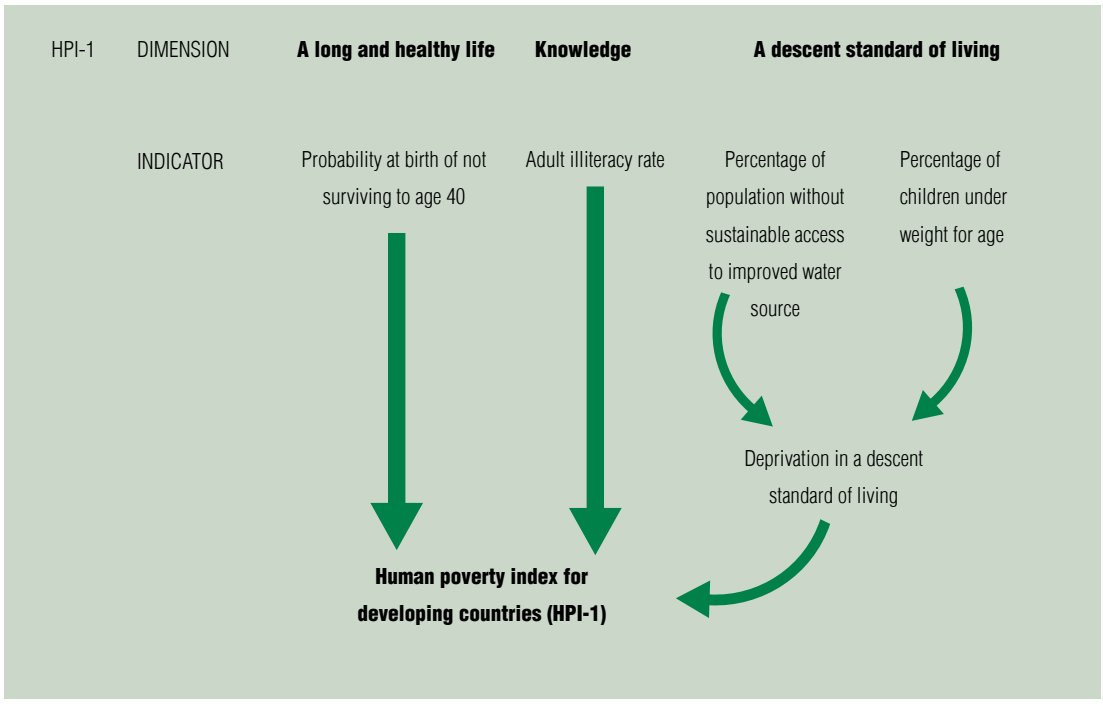
Box 3.6 Human Poverty Concept in Uganda

Pillar 5 of the PEAP identifies investment in education, access to a good health care and a sustainable improved water source as central and necessary conditions for the development of a nation. The Uganda Participatory Poverty Assessment Process (UPPAP) 1 and 2 state that poverty in Uganda is not just a lack of income. Rather, poverty is the inability to satisfy a range of basic human needs, and stems from powerlessness, social exclusion, ignorance, lack of knowledge, and shortage of material resources. The different dimensions reinforce each other.

3.2.1 Trends in Human Poverty Index

The National HPI for 2005 was estimated at 25.21 as compared to 36.0 for 2003 (see Table 3.3A Annex A and Fig. 3.18). This improvement could, among others, be attributed to three major factors: first, there was a decline in the adult illiteracy rate from 32.3 per cent in 2003 to 30.8 per cent in 2005. This improvement is a result of the concerted effort spearheaded by both the Ministry of Gender, Labour and Social Development and the NGOs (such as Save the Children Fund, Action Aid Uganda, etc)

Fig. 3:17 Computation of HPI-1



to extend both Functional Adult Literacy (FAL) and Basic Education to all regions (including the conflict-affected population of northern Uganda).

Like all other MDGs, the government has worked on Goal 7, which aims at, among others, halving the proportion of the population without sustainable access to safe drinking water (goal is 77 per cent of the rural population and 100 per cent of the urban population by the year 2015 with access to safe water). Data shows that the percentage of people accessing safe water both in rural and urban areas in Uganda increased from 63 per cent in 2003 to 68 per cent in 2006. However, access to safe water improved much more in rural areas, from 58 per cent in 2003 to 64 per cent in 2006, than in the urban areas where it remained at 87 per cent in 2006. Despite the insecurity problems caused by the armed conflict in the north, the Northern Uganda Social Action Fund (NUSAF) project has supported several socio-economic interventions including sinking of boreholes, which has resulted in improved access to safe water coverage. In the northern region, although the average distance to a water point stood at about a kilometer, the average time taken in queues for accessing water (54 minutes) almost doubled the national average. However, in general, the strategy of bringing water closer to the households has directly reduced the burden on women and the girl child who dominate the water fetching activity at household level.

Box 3.7 Improving Access to Water would Benefit Women and Girls

Goal 7 of the MDGs aims among others at halving the proportion of the population without sustainable access to safe drinking water. In line with the PEAP, the targets of the water sector include; sustainable safe water supply and sanitation facilities within easy reach for 77 per cent of the rural population and 100 per cent of the urban population by the year 2015.

Collecting water and carrying it over long distances keeps million of girls out of school and is a major cause of illiteracy. Deprivation of water and sanitation perpetuates gender inequality and dis-empowers the women, who bear the brunt of collecting water often spending up to four hours a day walking and waiting in queues. Bringing water closer to the households would reduce on the time, energy and related risks for girls and women. Access to safe drinking water would also reduce HIV-related opportunistic silliness and waterborne diseases and collate to the decline in infant and child morbidity and diarrhoea

HDR: 2006

Box 3.8 Access to Safe Drinking Water

According to UNDP estimates, halving the proportion of Uganda's population without sustainable access to safe drinking water and improved sanitation by 2015 would imply increasing overall coverage to 62 Per cent One of the findings of the Demographic and Household Survey 2006 was that the rural water coverage has already reached 64 per cent, in which case MDG target for rural safe water coverage has already been met. This achievement could be, among others, attributed to the budget allocation to the water sub-sector of the 1990s.

However, the facility-based data from the Directorate of Water Development (DWD) estimates existing rural water coverage as closer to 55 per cent, in which case the national target of 62 per cent has not yet been achieved, but should be achieved by 2015. The water and sanitation sector itself has two more ambitious targets, 77 per cent for water coverage and 95 per cent for rural water coverage by 2015. These are not likely to be achieved within the existing resource envelope and projections since the water and sanitation sector also has to produce water as well as meet the demands of urban water and sewerage works, hygiene promotion and sanitation in rural growth points and in urban centres.

Source: Poverty Eradication Action Plan (2004/5-2007/8)

Third, the nutritional status of children is fundamental to the survival of a country's population. Feeding practices and infections directly influence the nutritional status of children. Table 3.4 shows that the country's population of children who are malnourished has improved from 23 per cent in 2001 to 16 per cent in 2006[16] (WHO revised the child growth standards in 2006 and these were used to compute the 2006 figures. These may not be comparable with the 2001 and caution should be taken when making the comparisons. If you are to compare, there is an improvement from 23 per cent to 20 per cent using the old growth standards). This improvement is in part due to several interventions, notably the National Nutrition and Early Childhood Development Project (NECDP), and other income generation and livelihoods initiatives by UNDP, NUSAF and Local Government Development Programme (LGDP), among others. However, according to the Poverty Status Report (2005), poor performance of the food sub-sector has resulted in continued problems of malnutrition and pockets of famine and hunger in the country. The prevailing levels of childhood under- and mal-nutrition are high, accounting for 40 per cent of all deaths of children before the age of five.

3.2.2 Regional and District Level HPI

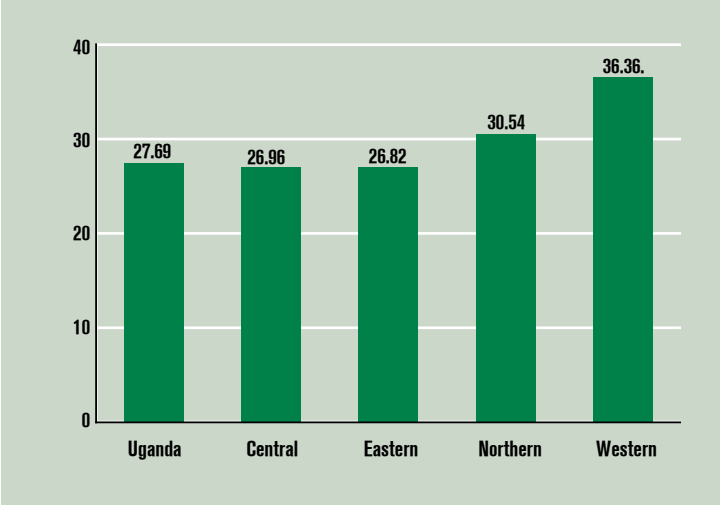
The HPI for central region was estimated at 26.96, which put the central region as the best performing region in terms of poverty reduction. The eastern region with HPI of 26.82 followed the central region, while the northern region had the highest HPI of 30.54, and hence the worse-off in terms of welfare status. Northern Uganda shows the lowest probability of one living up to age 40; with the highest level of illiteracy and the highest percentage of children who are under-weight. This is mainly attributed to the continued armed conflicts in the area that has kept the region in continuous deprivation. Western Uganda with HPI 36.36 was third and its high level of HP1 was partly attributed to limited safe water coverage.

Table 3.4 Regional Comparative Poverty Indicators

Region	Unsafe water source	Under weight (p2)	Not expected to survive to age 40 (%)	P3* 100 - C1	Econ. Prov Average of Cols (4 & 5)	HPI
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Uganda	32.40	20.40	0.07	7.04	30.84	27.69
Central	37.41	15.24	0.10	9.70	17.68	26.96
Eastern	20.14	23.04	0.06	6.30	36.71	26.82
Northern	25.69	27.02	0.06	5.83	40.88	30.54
Western	47.55	21.30	0.06	6.01	33.15	36.36
Urban	13.20	13.75	0.05	4.93	14.29	12.12
Rural	36.40	21.10	0.82	81.57	34.12	59.46

Source: UBOS, 2006

Fig. 3.18 HPI by Region

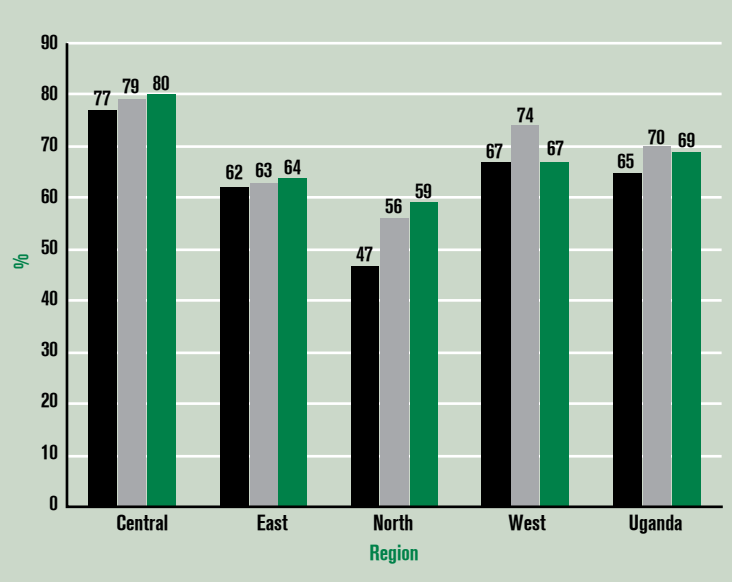


Approximately, 52 per cent[17] of the households recorded improvement in their welfare as a result of accumulation of assets, mainly land and livestock. The same study established that the northern Uganda population that had recorded an increase in income poverty rose from 3.3 million in 2002 to 3.9 million in 2004. This increase in poverty was attributed to increased deprivation resulting from prolonged drought, cattle rustling and armed conflict that prevented people from engaging in income generating activities.

16 UDHS 2006 (Generally , figures in this table are not consistent with the current data available at UBOS.
17 Moving Out of Poverty Report (2005)

According to the Uganda National Household Survey Reports of 2005/2006 and that of 2003, the literacy status of the population aged 10 years and above stood at about 70 per cent in both 2003 (63 per cent females, 77 per cent males) and in 2005/2006 (females 63 per cent and males 76 per cent, urban 86% and rural 66%).

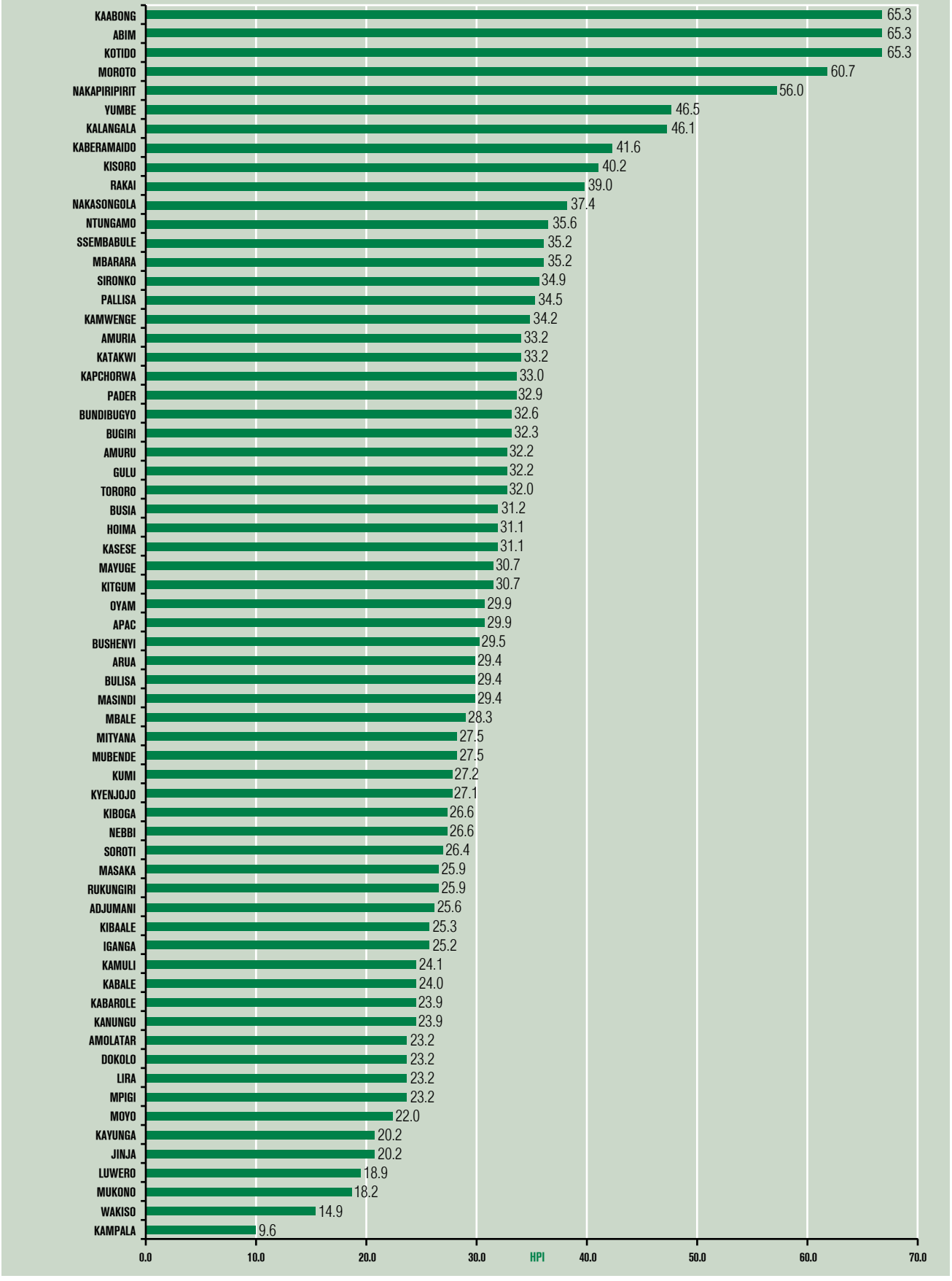
Fig. 3.19 Literacy Rate for the Population Aged 10+ Years



Related to literacy among women are the fertility rates. Studies have shown that there is a direct link between literacy and fertility rates among women. Women with no education have a Total Fertility Rate (TFR) of 7.7, and those with primary education have a TFR of 7.2, while those with more than primary education had an estimated TFR of 4.4 in 2006[18]. At regional level, the north recorded the lowest level of literacy rate (56 per cent in 2003, 47 per cent in 2000, followed by eastern region at 63 per cent in 2003. The districts of Kotido, Moroto, and Nakapiripirit were ranked most deprived as shown by their high HPI. These three districts are all from Karamoja sub-region, which is affected by the cattle rustling, disarmament, drought and other factors that make healthy and wealthy living difficult to attain. This too explains why the northern and eastern regions remain more deprived as measured by HPI. Central region, however, fared comparatively better. The districts, which showed good performance, were Kampala, Wakiso, Luwero and Mukono, which have better access to improved social services such as education and health, and better economic opportunities (Fig. 3.20).

18 UDHS 2006

Fig. 3.20 **Human Poverty Index at District Level, 2005**



3.2.3 Rural Vs Urban HPI

When HPIs for rural and urban areas were compared, the rural areas were worse-off than the urban areas. The HPI for rural areas stood at 28.0 as compared to that of urban areas, which were 12.8 in 2005 (See Fig. 3.21).

Fig. 3.22 shows that the adult literacy levels are far higher among the urban dwellers than the rural population, a fact that contributes greatly to the HPI differences. Comparing the rural and urban HPI for 2005 with those of 2003, there has been a significant improvement in both the rural and urban HPI for 2005. For both rural and urban areas, there was a reduction in poverty levels in 2005 as compared with 2003. However, for both periods under review, rural areas have recorded and still exhibit comparatively higher poverty levels than urban areas.

Fig. 3.21 Rural Vs Urban HPI

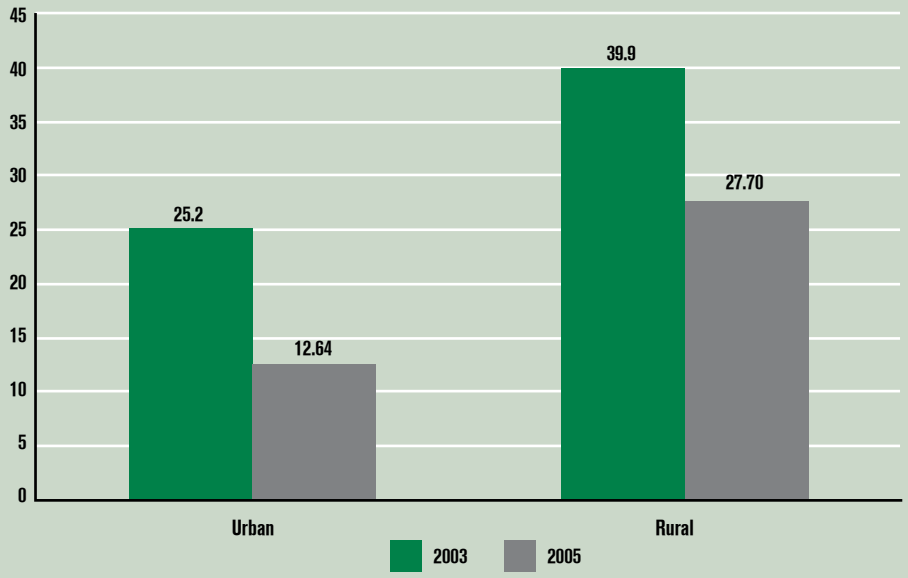
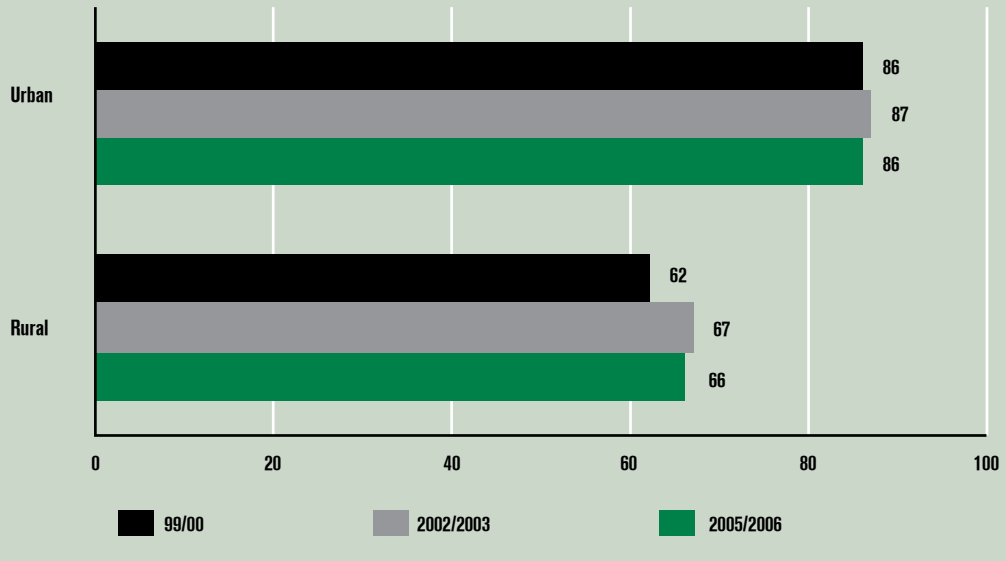


Fig. 3.22 Adult literacy Levels by Rural/Urban Divide



3.3 Gender Empowerment Measure (GEM)

The GEM focuses on women opportunities rather than their capabilities, and it captures gender inequality in the three key areas of:

- Political participation and decision-making powers, as measured by women's and men's percentage share of parliamentary seats.
- Economic participation and decision-making power, as measured by two indicators: women's and men's percentage shares of positions as legislators, senior officials and managers; and women's and men's percentage shares of professional and technical positions.
- Power over economic resources, as measured by women's and men's estimated earned income (PPP US$).

3.3.1 National GEM

Following the illustration in Fig. 3.23, GEM was calculated at the national level using national and district specific data as shown in Tables 3.5 and 3.4A Annex A. The district specific estimates could not be discussed in this report due to small numbers of parliamentary seats in new small districts that would produce such bias in the outcome but when aggregated for the national level, then estimates make sense. The regional level GEM could not still be computed as some of the parliamentary seats like the youth, army, etc had no district bearing. In general, Uganda's GEM stood at 0.583 in 2005 as compared to 0.549 in 2003.

Fig. 3.23 Computation of GEM

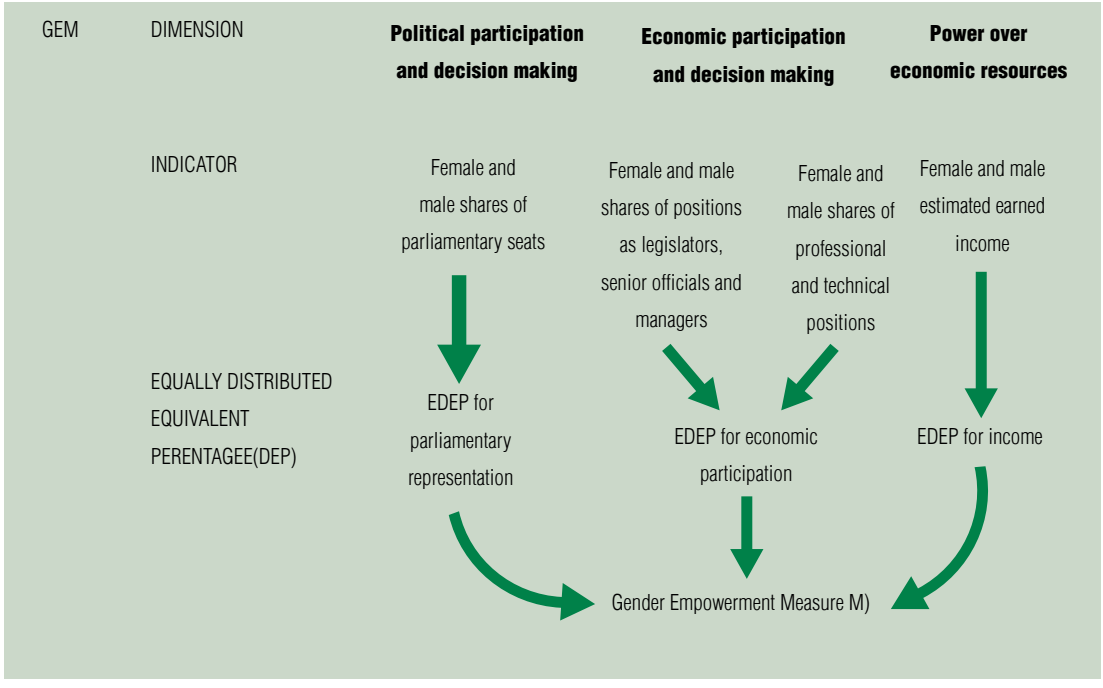


Table 3.5 Gender Empowerment Measure, 2005

Serial No.	Equally Distributed Equivalent Percentage (EDEP)	2001 GEM Index	2003 GEM Index	2005 GEM Index
1	Parliamentary Representation	0.5981	0.736	0.844
2	Economic Participation	0.6274	0.875	0.868
3	Income	0.0267	0.0348	0.0382
4	Gender Empowerment Measure (GEM)	0.4174	0.549	0.583

3.3.2 Political Participation in Decision-Making

The ratio between women and men in parliament (69.3 per cent males and 31 per cent females) sheds light on the extent to which men and women are participating in national governance in Uganda. The ratio is also a pointer to existing structural (fundamental) barriers to women's participation in governance. The fact that women represent more than half (51.2%) of the Ugandan population, their participation in governance structure lends legitimacy, besides serving as role models, which inspire other women to stand for and hold public offices. Consequently, the male-female ratio of Members of Parliament and attainment of gender balance is a crucial indicator of women's capacity in parliament to represent women's interests and needs at national level.

Uganda ranks 48 out of 115 in attaining gender equality which is due to high participation of women in parliament as already stated (31%) while 23 per cent of total cabinet posts, are held by women (Global Gender Gap Report, 2006). The political will to treat gender equity in governance and participation at policy level has improved women's participation in decision-making at national and local levels. For instance, the establishment of a fully-fledged Ministry of Gender, Labour and Social Development and the implementation of affirmative policies to reduce gender imbalances in several key areas namely, basic and higher education, local governance (gender budgeting), politics, and management. The civil society, too, has supported gender empowerment efforts in the country. The National Women's Council, for instance, has over 300 women-focused NGOs that support gender empowerment in areas such as enhancing their access to credit and legal services and promoting equal opportunity by women in formal employment.

The Local Council (LC) system has a legal provision that at least one third of the posts are reserved for women, in addition to the post of Secretary for Women Affairs. At the national level, every district has a woman Member of Parliament. This is in addition to the women who aspired and successfully competed against men for constituencies; the special appointees to parliament by the President; and the special interests groups (such as persons with disabilities, youth, workers, army, etc).

Despite the above gender empowerment efforts, the performance of women in LCs, compared to their male counterparts, is still limited owing to several inhibiting factors such as low level of education, poor lobbying and networking skills, time poverty (due to women traditional responsibilities) and lack of assertiveness to champion the women agenda.

3.3.3 Economic Participation in Decision-making

The women's economic participation is premised on the notion that gender inequality acts as a constraint to growth and poverty reduction. On average the Ugandan woman earns US$1,216 which is higher than what women earn in other

countries in East Africa such as Kenya at US$ 1,037 and Tanzania at $569 (Commonwealth Secretariat, 2007). It is estimated that if gender inequalities are removed in Uganda, the GDP growth rate would increase by 2 per cent (GGA Report for Uganda, 2006)

While Uganda shares the global trend of men having higher entrepreneurship rates than women, the rate for women is also exceptionally high. Despite their contribution to the economy, majority of women are locked out because they are financially illiterate and lack collateral. Their businesses remain small, employing fewer workers mostly because they do not have adequate capital and yet many financial institutions insists on collateral. This is compounded by the fact that cultural norms and gender-related legal and administrative barriers dictate that very few women own land or immovable property.

Further, women participate less in the labour market than men, due to the difference in average educational status and labour market institutions that discriminate against women. Women also work much longer hours on domestic/care activities than men and are therefore overburdened. Generally, women are more dependent on farm self-employment than on non-farm and formal employment. According to the 2005/6 household survey, the most notable barriers to formal sector employment to women include high fertility, discrimination in formal labor markets, gender inequalities in education, and difficulties of combining employment with childcare. The majority of women are engaged in the primary sector (agriculture) which is characterised by uncertainty and low returns to labour and the limited coping opportunities. This is because it is predominantly of a subsistence nature.

3.3.4 Control over Economic Resources

Lack of control over productive resources, especially land, crop and livestock as well as control of their labour is a fundamental determinant of the gender dimension of poverty. These disadvantages undermine the opportunities and incentives of women to participate in commercial agriculture and other income-generating activities. This is also a direct cause of welfare problems like poor nutrition and health, excessive fertility and high infant mortality, which in turn inhibit them engaging in commercial agriculture and other rural economic activities.

e-headed ones. Besides time poverty, women lack starting capital, information, skills, inputs and access to markets, restricting their participation in crop and animal husbandry as well as fish related enterprises.

In the case of improving agricultural production and productivity, widening women's access and control over productive resources, especially factors of production (such as land) and institutional support systems would fundamentally reduce poverty among the rural women through semi-commercial agriculture and other non-farm income generating activities. This would directly impacts on rural households through the spin-offs to human development by a) improved nutrition and health through improved incomes, b) controlled fertility rate due to continuous engagement in economic activities, c) reduced infant mortality as a result of affordable primary health care services, among others.

Box 3.9 Uganda's Progress in the Advancement of Gender Empowerment (MGLSD, 2005)

- Affirmative action in education has favoured women entry to institutions of higher learning leading to a rise from 31 per cent in 1993/94 to 40 per cent in 2002 and to 42% in 2004.
- The girl child policy under UPE has improved gender parity in primary school enrolment (49 per cent girls to 51 per cent boys in 2005).
- Women's land rights have been recognised in the Land Act (1998), including requirement for spousal consent on all matters relating to land from which the family derives sustenance.
- Most of Micro Finance Institution (MFI) borrowers (55%) are women various economic engagements i.e. commerce (72%), services (63%), animal husbandry (60%) and 48 per cent manufacturing (MFPED, Poverty Status Report 2003).
- A technical working group (The PEAP gender team) was established to oversee gender mainstreaming in the PEAP during its revision process in 2003/04.
- MAAIF (PMA and NAADS) have developed guidelines and strategies for enhancing poverty and gender targeting in their implementation.
- Gender and equity budgeting has been initiated as part of a national and local government budgeting process starting with 2004/05 financial year;
- Gender mainstreaming is part of the minimum standards and performance measures under the annual national local government assessment.
- The road and water sub-sectors have developed gender policies and guidelines to improve proximity of social services and enhance women participation in decision-making processes.
- The revised National Gender Policy provides a framework for sectoral plans and strategies that promote gender empowerment.
- Uganda ratified the Convention on the Elimination of All Forms of Discrimination Against
- Women (CEDAW) in 1995, without reservations. The Constitution of 1995 enshrines gender equality in many of its provisions.

4

AGRICULTURAL PERFORMANCE , RURAL DEVELOPMENT AND LINK WITH HUMAN DEVELOPMENT

CHAPTER 4

AGRICULTURAL PERFORMANCE, RURAL DEVELOPMENT AND LINK WITH HUMAN DEVELOPMENT

4.1 Introduction

Poverty is a fundamental cause of deprivation in the critical elements of human progress, namely, a decent standard of living, a long and healthy life, and knowledge. Poverty eradication is therefore a fundamental objective of Uganda's development strategy. Agricultural sector performance is key to the achievement of poverty reduction goals and, for this reason, Government policy since 2001 has been focused on intensifying agricultural production and productivity as a means of raising household incomes of the poor in the rural areas through provision of public goods and services that facilitate agricultural growth and increased non-farm employment.

This chapter shows the interface between agricultural performance, rural development, and human development. It is demonstrated that the relationship between agricultural performance and human development is two-way. On the one hand, improvements in agricultural and rural development performance can positively influence human development – the improvements in agricultural performance are associated with acquisition of knowledge and skills by farmers, and the resulting success further creates a real sense of self-confidence and opens the door to a horizon beyond the rural area (e.g. in trade and commerce). On the other hand, improvements in human development can enhance agricultural performance through the effective support and application of the essential intermediary factors (see Fig. 2.1), with the greater knowledge and skills acquired by farmers enabling them to effectively use new technology and inputs, access markets, research and extension services, and make better use of services provided by the public and private sectors.

Because of the strong inter-relatedness and linkages between agriculture and human development, the agriculture and rural sector is well positioned to contribute not only to income poverty and food security but also to other aspects of human development that are spelt out in the PEAP and the MDGs. But what are the challenges of transforming Uganda's agriculture and rural development sector? The challenges are seen in the size of the sector relative to the other sectors. The agricultural sector is the largest user of land and labour resources, and its performance can therefore have both a direct and indirect impact on human welfare. Thus, increased crop, livestock, fisheries and forestry production can positively impact on the consumption and hence nutrition level of producers, and vice versa. This report recognises that since Uganda is an agrarian country, its poor agricultural performance would lead to low human development outcomes. Greater public and private sector investment in the agricultural sector should therefore be encouraged so as to improve agricultural performance.

4.2 Overview of the Agriculture and Rural Development Sector

4.2.1 Agriculture and Rural Resource Base

Land and labour resources are key factors of production, and in Uganda the distribution and utilisation of these resources is a matter that is assuming policy and strategic importance. The other resource is water, whose distribution is important not only for access to fisheries resources as well as for crop and animal production but also for human consumption. Table 4.1 shows the regional distribution of land and water resources.

Table 4.1 Uganda Land and Water Resource Cover - in Km2

		Region					
		Central	Eastern	Northern	Western	Uganda	% Share
a) Farmland	Total area	16,698	19,210	29,147	19,639	84,694	31.5
	Subsistence	16,468	19,050	29,116	19,376	84,010	34.8
	Commercial	230	160	31	263	684	0.3
b) Forestlands	Total area	2,782	858	74	5,880	9,593	4.0
	Plantations	71	70	59	151	351	0.1
	THF	2,711	788	15	5,729	9,242	3.8
c) Woodlands		7,155	1,789	22,403	8,395	39741	16.4
d) Bushlands		2,301	619	8,718	2,587	14,224	5.9
e) Grasslands		9,350	5,727	22,836	14,239	51,153	21.2
f) Wetlands		1,408	1,742	633	1,058	4,841	2.0
g) Other lands		169	92	62	80	403	0.2
h) Water		21,540	9,442	1,520	4,400	36,903	15.3
Total area		61,403	39,479	85,393	55,278	241,552	100.0

Source: NFA National Biomass Study, 2003; UBOS Statistical Abstract, 2006

Uganda is well endowed with good land that is suitable for crop and livestock production, and this is reasonably spread throughout the country. About 8.5 million hectares or 35.1 per cent of total area (45 per cent of land area) is farmland. Subsistence farmland constitutes 42.0 per cent of total land area, while commercial farmland is quite insignificant. About 65 per cent of farmland (subsistence and commercial farmland) is annually under annual and permanent crops; the rest is fallow or marginal land. Only 4 per cent of the total area (4.8 per cent of land area) is under forest reserves.

About 44 per cent of the total area is under bush land, woodland and grassland. While there is scope for expanding agricultural land into woodlands, bush lands and grasslands (about 44 per cent of total area and 53 per cent of land area), most of it is likely to be marginal land. The potential is, rather, greater in the expansion of livestock production in these areas. Because most of the good agricultural land is already almost fully utilised, increased crop production will in future rely on more intensive techniques combined with some limited expansion of land and reduced fallow area.

Open water and wetlands, which constitute about 17 per cent of the total area, contribute significantly to food production by way of exploitation of fish and wetland products. Water resources are not evenly distributed across the regions. The central region has 55 per cent of the total water and wetland resources, followed by eastern region, with 27 per cent, western region with 13 per cent and the northern region with 5 per cent.

Table 4.2 shows the regional distribution of the total rural and urban population and also indicates the pressure on the land (population densities) and overall land availability (household availability). From the table, it can be seen that 85 per cent of the population are rural dwellers. Both the eastern and western regions have the highest proportion of the population (92%) living in rural areas. The central region, with 71 per cent of the total population in rural areas, is the most urbanised of all the regions. This is followed by the north with 86 per cent of the total population in rural areas.

Report, show that improved seeds, fertilisers, agro-chemicals, and manure were applied on only 6.3 per cent, 1.0 per cent, 3.4 per cent and 6.8 per cent of the parcels of agricultural land, respectively (Table 4.3).

Table 4.3 Use of Agricultural Inputs (% of parcels)

Region	Improved Seeds	Manure	Chemical Fertilizers	Agro-chemicals
Central	5.5	8.7	1.3	4.8
Eastern	11.9	4.1	1.1	4.7
Northern	7.6	0.5	0.7	2.6
Western	2.2	9.6	0.6	1.5
Total	6.3	6.8	1.0	3.4

Source: UBOS, UNHS Survey 2005/6

Table 4.2: Regional Distribution of Population and Population Densities

		Region				
		Central	**Eastern**	**Northern**	**Western**	**Uganda**
a) Population (mid-2006)	**Total ('000)**	7,937	6,840	5,363	7,031	27,171
	Rural ('000)	5,603	6,305	4,597	6,493	22,998
	Urban ('000)	2,334	535	766	538	4,173
b) Population Density	**Total/ Km2**	212	249	65	142	138
	Rural/ Km2	153	232	56	132	118
	Urban/ Km2	3,349	1,814	2,016	868	2,095
c) Rural Land Area (Km2)		36,724	27,184	82,407	49,021	195,330
d) Urban Land Area (Km2)		697	295	380	620	1,992

Source: NFA National Biomass Study, 2003; UBOS Statistical Abstract, 2006

Crop and livestock farming, and the extraction of aquatic and forestry resources, employ 73.3 per cent of the working population (14 - 64 years old) and are thus the key primary economic activities of the Ugandan people. By comparison with other sectors, 60 per cent of the male working population is employed in agriculture compared to 10.7 per cent in industry and 28.8 per cent in services; and 77 per cent of the female working population is engaged in agriculture compared to 4.8 per cent in industry and 17.8 per cent in services.

Agricultural production in Uganda is heavily resourced-based, with labour and land being the most significant inputs and other inputs being insignificant. The findings of the UNHS, 2006 (Agricultural Module)

4.2.2 Agricultural Contribution to GDP

The primary[19] agricultural activities generate nearly 40 per cent of the country's gross domestic product (GDP), 70 – 80 per cent of export earnings, almost all domestic food requirements, and most of the raw materials required in local industries. Table 4.4 provides the share of primary agriculture in the total GDP, highlighting the significance of the individual sub-sectors.

19 Primary agricultural activity relates to activities at the point or near the source of production and includes primary marketing.

Table 4.4 Agriculture Sector Performance and Share of GDP 1991/92 - 2005/06 (%)

Sub-sector	1991/2-1995/6	1996/7-2000/01	2001/2-2005/6
	% of GDP	% of GDP	% of GDP
Total agriculture	47.7	41.6	37.7
Cash crops	4.1	4.7	4.1
Food crops	32.3	27.1	24.8
Livestock	6.2	5.4	4.8
Forestry	2.0	1.8	1.8
Fishing	3.1	2.7	2.2
Other Sectors: Industry /Services	52.3	58.4	62.3
Total GDP	100.0	100.0	100.0

Source: UBOS and UNHS 2005/06

Table 4.4 shows an overall decline in the share of primary agriculture and its constituent parts to GDP. One of the reasons for the apparent structural changes is the increased share of agricultural processing and marketing services, which are in effect transferred off the farm into the other sectors of the economy. It is therefore not possible to say that the observed decline in the share of agricultural GDP is the beginning of the expected economic transformation – which is defined as a change in the relative importance of the different economic sectors associated with the shift from a predominantly agricultural economy to one dominated by the industrial and service sectors.

There are two crucial missing elements in the current shifts in the agricultural GDP share which would constitute the beginning of structural change. First is the absence of substantial increases in the productivity of agriculture. Crop and livestock yields are still very low, being only a quarter to half of what can potentially be achieved even with present technologies. Secondly, the decline in primary agriculture in GDP (reflecting mainly increased processing and marketing services) has not been accompanied by declines in the share of the labour force that is engaged in production (which is presently about 73 per cent of the total labour force). The transformation of subsistence agriculture into commercial agriculture, which is the mission of the PMA, will be achieved when these conditions are met. These conditions will be met when there is substantial human development in the rural sector.

4.2.3 Contribution to Exports and Imports

Uganda's domestic exports are dominated by coffee, tea, cotton and tobacco (the traditional cash /export crops), and fish, cut flowers, hides and skins, among the principal non-traditional exports.

Following the liberalisation of the export sector and encouragement of the private sector, most of the agricultural sector policy reforms in the past ten years were directed at liberalising the cash crops sub-sector. These reforms have resulted in substantive changes, especially in the coffee, cotton, tea, tobacco and sugar industries where improvements in production have occurred, and also ushered in the growth of non-traditional exports, which have increasingly reduced the relative importance of the traditional export sector. In 2005, for instance, coffee, tea and tobacco contributed 32.9 per cent of the country's total exports, while agricultural non-traditional exports (cereals, oil seeds, spices and fruits, hides and skins, roses and cut flowers, fish and fish products, and bananas) contributed 28.1 per cent of total exports. Thus bringing total agricultural sector contribution to 61 per cent of national exports. This reflects a decline from 2001

when total agriculture sector contribution to exports was 70.6 per cent, of which traditional export was 38.3 per cent and non-traditional export was 32.3 per cent.

Despite the foregoing, the contribution of the agricultural exports to gross domestic product has stagnated at an average of 4 per cent in the past ten years. Its share of monetary agriculture remained for several years at an average of 13.4 per cent up to 1995, increasing to 18.8 per cent in 2001/2 and slightly decreasing to 17.8 per cent in 2005/6. This data reflects the fact that the overall national export sector is small and narrow relative to the domestic economy, and the country relies very heavily for its balance of payments health on a narrow export base.

4.3 Agriculture and Rural Sector Performance

4.3.1 Crops Sub-sector

Food crops hold the key to improving food security and nutritional status of rural population, while crop exports still hold the key to the health of the balance of payments. Overall, the national production levels of these crops remains low, thus pointing to Uganda's potential for substantially increasing production. Equally important is the proper management of the country's environment and natural resources that are critical in sustaining production performance in all sectors of the economy.

The food crops sub-sector embraces the production of staple food crops as well as horticultural crops that are consumed domestically and for export. A wide variety of food crops are grown in Uganda, reflecting not only the suitability of the soils and climate but also the diverse agro-ecological endowments. Food production is the most widespread economic activity in Uganda, involving many millions of Ugandan farmers across the country and contributing, on average, 25 per cent of total GDP and 66 per cent of agricultural GDP per year in the past five years (Table 4.4).

Recent trends in the production of key food crops show that while overall acreage has been on the rise, the output trend has been on the decline. Food production is the domain of women whereas men in general concentrate on livestock and cash crops, which have a higher potential for income generation. However, ownership based on traditional gender divisions is changing fast, especially as former food crops are becoming cash crops and falling under the control of men, thereby threatening food security. This signifies a drop in productivity and consequently per capita output and incomes of producers, the majority of whom are small-scale farmers.

Table 4.5: Production of Selected Food Crops in 2001-2006 ('000 Ha and '000MT)

	Plantain		Cereals		Root crops		Pulse		Oil Seeds	
Year	Ha	Pdn	Ha	Pdn	Ha	Pdn	Ha	Pdn	Ha	Pdn
2001	1,622	9,732	1,407	2,309	1,035	8,288	902	665	538	392
2002	1,648	9,888	1,445	2,368	1,065	8,511	940	692	573	420
2003	1,661	9,700	1,495	2,508	1,080	8,617	958	690	599	430
2004	1,670	9,686	1,549	2,274	1,092	8,723	991	623	620	420
2005	1,675	9,380	1,605	2,526	1,063	8,765	1,009	648	667	476
2006*	1,677	9,054	1,679	2,557	1,053	8,182	1,032	599	652	495

*Estimates

Source: UBOS, 2006 ,2007 Statistical Abstract

Besides the observed decline in per capita output, current food crop production patterns also show a very marked imbalance in the supply of different foods, with starchy foods dominating the national food balance sheet. In period 2001/2-2005/6, for instance, bananas accounted for 44.6 per cent of the total tonnage of food produced on average and root crops accounted for 26.8 per cent. Cereals accounted for 11.2 per cent, oilseeds 2.8 per cent and pulse crops (beans, peas) 3.1 per cent of the total staple foods produced. This has implications for the nutritional balance and food security of the population, since the production of

crops with high nutritional values is low. Policy-makers need to address this imbalance which affects national nutrition and its impact on human development.

Uganda as a whole is self-sufficient in staple food supply. However, there are some significant importations of mainly vegetable products and cereals. Table 4.6 shows that Uganda is a net importer of foodstuffs. The imbalance, which is significant especially in the export and import of cereals, reflects the fact that national cereal production has not been accorded adequate attention in food production policy.

Table 4.6 Total Foods and Cereals Exports and Imports ('000 US$)

Item	2001	2002	2003	2004	2005	Average
Total Food Exports	103,829	106,230	116,148	144,569	196,894	133,534
Total Food Imports	88,035	103,752	150,521	191,648	226,015	151,994
Balance + (-)	15,794	2,478	(34,373)	(47,079)	(29,121)	(18,460)
Cereals Exports	20,439	12,339	17,592	26,360	31040	21,554
Cereals Imports	54,421	73,039	106,698	134,431	141,194	101,957
Balance + (-)	(33,982)	(60,700)	(89,106)	(108,071)	(110,154)	(80,403)

Source: MAIIF, 2006

The import of food is largely driven by the country's urban dwellers and this has deprived Uganda of an opportunity to promote growth of the local food industry. Therefore, the rural sector is not expanding because of this phenomenon.

4.3.2 Livestock Sub-sector

Livestock production is an integral part of the farming system in Uganda and almost one-third of farming households depend on livestock for the major part of their income. Studies and analyses over the past thirty years have invariably identified this sub-sector as a major source of potential growth in the agricultural sector. Livestock production is, however, very low whether measured in animal units or in per unit area of land utilised. The table below shows the trend in livestock numbers.

Table 4.7 Livestock Numbers ('000 animals) in 2001 to 2005

Category	2001	2002	2003	2004	2005
Cattle	6144	6328	6519	6567	6770
Sheep	1108	1141	1175	1552	1600
Goats	6620	6852	7092	7566	7800
Pigs	1644	1710	1778	1940	2000
Poultry	29671	32639	35903	31622	32600

Source: MAIIF, 2006

The sub-sector's contribution to total GDP has declined from about 25 per cent three decades ago to only 5 per cent in 2001/02-2005/06. Its share of agricultural GDP has declined from 30 per cent to 12.7 per cent in the same period. Available supplies of beef, milk and poultry products fall short of domestic demand (Table 4.8). The deficit in these products has been constant for several years, thus enhancing conditions for inadequate nutrition among the population at large. This is so despite very favourable growing conditions which offer the promise for expanded feed supplies for livestock, for higher animal productivity, and for a greatly expanded livestock industry.

Table 4.8 Livestock Products - National Supply and Demand Balance 2004/5

Product	Supply	Demand	Balance
Milk (mill. Litres)	408.0	540.0	-132
Beef (000t)	102.0	148.0	-46
Goat/Mutton (000t)	24.0	20.0	4
Pork (000t)	28.0	15.0	13
Poultry (000t)	38.0	43.0	-5

Source: MAAIF Statistics, 2006

One of the reasons for this appears to be the absence of real growth in the sub-sector as a whole. Over the long term, cattle numbers have not increased beyond the range of 5 million to 5.5 million. This species of livestock has been very adversely affected by the civil strife of the 1980s and early 1990s and has not recovered fully even in areas where peace has returned for several years. All the other species of livestock show similar trends, with numbers not

really showing a substantial sustainable increase.

Box 4.1 Gender Relations in the Livestock Sub- sector

Women play key roles in the pastoral livelihoods structure, owning small stocks of livestock, milking and caring for the calves. These are crucial to their survival, health (nutrition) and improved livestock productivity but are time-consuming. Interventions to enable women access to technologies and information related to livestock health and disease control are therefore important. With respect to disease control, the service provides are mostly male and do not adequately target women farmers. This is aggravated by the cultural attitudes which prohibit women from interacting with male services' providers, and therefore women have limited access to appropriate technical skills for livestock management as well as credit facilities.

Currently the livestock department of the Ministry is promoting poultry and many women farmers are doing well in this area. However, ownership of big hatcheries where there are big investments and big profits, is in the hands of men. Women do not own ranches; they neither have capital nor land. In a bid to address these inequities, measures have been taken to increase the enrolment of female undergraduates in Veterinary Medicine at Makerere University to which has mainstreamed gender into its curriculum.

4.3.3 Fisheries Production

About 42,000 sq. km of Uganda's surface area is under water and wetlands. There is also good potential for fish farming and exploitation of other aquatic resources. More than 6,000 fish ponds have been established and commercial fish farming offers farmers additional business opportunities. Table 4.9 below shows fish catches from major lakes and rivers during 2001-2004.

Table 4.9 Fish Catch by Water Body ('000 tonnes) 2001-2004

Source	2001	2002	2003	2004
Lake Victoria	131.8	136.1	175.3	253.3
Lake Albert+Albert Nile	19.6	19.4	25.1	62.8
Lake Kyoga	58.4	55.6	32.9	68.5
Lakes:Edward+Edward+Kazinga Channel	6.4	5.2	5.9	9.6
Other Waters	4.5	5.6	8.3	40.6
Total	220.7	221.9	247.0	434.8

Source: Department of Fisheries, MAAIF, 2006

The potential annual fish yield from these waters has not been precisely determined, but some current guess estimates put the figure of sustainable harvests in the range of 300,000 to 400,000 metric tons of fish per year. Commercial catches in the past five years have averaged about 280,000 metric tonnes per year, with good catches realised in 2004 of 434,000 metric tonnes. The share of the sub-sector in the total GDP is quite low and declining, averaging only 2.2 per cent during 2001/2-2005/6, having declined from 2.7 per cent in 1996/7-2000/01 and 3.1 per cent in 1991/2-1995/6.

Fish production is a very important aspect of national food production but there are indications that fisheries resources are not efficiently and fully exploited. Firstly, present methods are destructive and do not allow for sustainability of the fish species. Secondly, the introduction of predatory species, especially the Nile Perch, might alter unfavourably the balance of species in the lakes. Thirdly, the sudden proliferation of modern fish processing factories geared to the export market and targeted largely at one or two species – the Nile Perch and Tilapia – might result in the rapid depletion of these species and therefore further complicate the balance of species in the water bodies. And lastly but not least, post-harvest losses are very high.

4.3.4 Forestry Production

In the present organisation of government portfolios, forests and related resources are placed under natural resources and

not directly considered under agriculture. Forestry enhances sustainability in agricultural production through environmental conservation. Forests are also important to agriculture in the following ways:

a) It is currently estimated that about 2.7 million Ugandans representing 15 per cent of the entire population directly depend on forest resources;
b) They provide almost 100 per cent of the energy that farmers use in their homes and the single major source of energy for over 90 per cent of the population;
c) They provide materials for construction on farms – living homes and farm buildings including stores, cattle sheds, kraals;
d) They provide protection for watersheds and catchments areas and thus help conserve soil, regulate water flow and biomass;
e) They provide conditions for sustainable agriculture;
f) Tourism revenue currently contributes 25 per cent of Uganda's export earnings of over US$30 million per year. While over 700,000 Ugandans are employed directly and indirectly in the sector and this 16 per cent of the total employed in the workforce.

The contribution of forestry to gross domestic product stands at 1.8 per cent, having declined from an average of 2.1 per cent in the period 2001-2005. In the early 1990s forest reserves covered about 7 per cent of the country with 700,000 ha in tropical high forests, 632,000 ha in savannah forests and 24,300 ha in plantation forests. In 2005 forest reserves covered 1,277,700 ha, which is a reduction in size from the 1990s. The increasing loss of forest cover and fuelwood shortage in many districts mainly affects women and children, who have to travel long distances to cover for the deficit.

As in the case of fisheries, the danger of over-exploitation of this resource remains a challenge. As the system of high-tropical forest management broke down and sawmill management deteriorated in the 1970s and 1980s, indiscriminate logging practices followed, which caused degradation of the forest environment and damaged wildlife habitats. Timber resources also have been depleted. Reserve boundaries were not respected and both reserves and savannah forests have been subjected to uncontrolled and damaging harvests. Management of softwood plantations – planted from the late 1940s to the 1960s – deteriorated. The trees, which reached maturity in the 1970s and 1980s, are being harvested on concessionary basis, but with no new plantings being made.

Given that large areas of formerly productive forests have recently been given the status of national parks, and as conifer plantations are not currently being replanted after harvesting, there is a real danger that Uganda will become a net importer of timber in the medium term. Yet given the climatic and environmental conditions prevailing in Uganda, there is significant potential for commercial industrial plantations. Most of the on going development projects in the sector focus on sustainable forest management and increasing forest production.

4.4 Factors Influencing Agricultural and Rural Performance

4.4.1 Markets

The major marketing problems in Uganda are due mainly to limited access to finance by many small traders, the small amounts that most farmers have to sell and the high costs and availability of transport. Government interventions are designed to gradually overcome these constraints. Otherwise, even with these limitations, the marketing system is relatively robust and efficient

and, although farmers complain of low and variable prices, these reflect the costs and risks of the current market system. Sometimes the market is unfairly blamed for an inability to cope with sudden production surges caused by encouragement of farmers to diversify into, or expand production of, specific products without consideration of the whole value chain, the size of the final market, agro-processing capacity and the financing and risk costs involved.

In Uganda, where market failures are largely a result of poor infrastructure and high transaction costs, considerable emphasis is being placed on collective group action as a way of reducing transaction costs and increasing bargaining power. This effort may, however, inadvertently divert attention from another important task, namely reducing the transaction costs of small traders and input stockists. Increasing their access to finance will enable them to buy larger quantities. Moreover, they are often in a better position to monitor seasonal loans to farmers than formal rural finance institutions, even if locally based. Increasing small-trader access to working capital should be an important component of any agricultural finance strategy.

"Marketing difficulties and low prices were also associated with exploitative traders and middlemen in half the PPA2 districts. In some sites, this led people to look back with nostalgia to the days when government set prices and cooperatives purchased production. However, in others, while liberalisation was noted to have led to exploitation, it was praised for enabling farmers to get cash payments on the spot when they sell their production. In some districts, officials recommended group marketing as a way of increasing farmers' bargaining power.

It was also noted that lack of market information caused marketing problems in four districts. For instance, in Kyamukube in Bundibugyo, farmers explained how lack of information on prices, coupled with lack of access to alternative markets due to poor roads, undermines their ability to negotiate prices with traders."

PPA2 NATIONAL REPORT

Marketing and agro-processing (MAP) is one of the pillars of the PMA that is being coordinated under the Ministry of Trade, Tourism and Industry (MTTI). The PMA vision for achieving 'improved market access' is "increased and sustainable supply of and demand for competitive processed and non-processed agro-products on domestic, regional and international markets", while the mission is "to implement measures that facilitate increased supply of requisite inputs in order to ensure increased and sustained supply of competitive processed and non-processed Ugandan agricultural products in domestic regional and international markets consistent with the economic growth objectives of the country". As emphasised earlier in this chapter, the realisation of the PMA vision and mission will hinge on the capacity of rural producers and processors to deliver the results. The link between performance and human development is clear – the farmers and processors must have the knowledge and skills necessary for improved performance.

While the MAP strategy only states that the target beneficiaries are 'small-scale farmers', within this very broad group actual benefits are likely to vary widely. For example, the criteria used for feeder road development and maintenance, the selection criteria used in providing marketing training to farmers' groups, the presence of agro-processing facilities in the locality, the farmers' ability to generate a marketable surplus, are just a few of the parameters that will determine the actual beneficiaries within the farming community.

Some of the components also target traders (e.g. ACE and WRS), although there should be indirect benefits for all those marketing produce through the new sources of finance that are mobilised. From a gender perspective, the majority of players in Uganda's rural market chain are male, with the exception of the main retailer markets

where most of the sellers are women (IFAD, 2003). Many women farmers tend to sell their produce to itinerant traders at the farm gate and thus may benefit from the increased choices available from the formation of marketing groups and bulk selling. The key message is that planned or existing interventions can alter the capacity of rural producers and processors either to their advantage or disadvantage.

4.4.2 Knowledge and Innovation

The task of increasing agricultural performance is directly linked to building human capacity through the enhancement of farmers' knowledge and skills. There are three key factors that contribute to building this human capacity, namely: research and technology adoption, agricultural advisory and technical services, and agricultural education and training.

Research and technological adoption

Following the launch of the PMA in 2000, Government realised the need to reformulate the national agricultural research system (NARS), including putting in place a policy and legal framework that responds to the needs of human development in the agriculture and rural development sector. The vision of the new agricultural research system and policy is "a farmer-responsive research system that generates and disseminates problem-solving, profitable and environmentally sound technologies on a sustainable basis". The PMA mission for research is "generation, adoption and dissemination of appropriate and demand-driven technologies, knowledge and information through an effective, efficient, sustainable, decentralised and well co-ordinated agricultural research system".

The key strategies that have been adopted to achieve a more farmer-responsive research system are:

- the decentralisation of research by establishing Agricultural Research and Development Centres (ARDCs) in key agro-ecological zones away from the central region; these should have autonomy to address indigenous knowledge and technology in their local areas;
- greater stakeholder involvement in priority-setting, planning-implementation and evaluation of research; subsistence farmers, processors, traders, NGOs, and CBOs would play a part here, and particular emphasis should be placed on developing technologies which address the needs of women farmers; and
- greater involvement of the private sector in both financing and conducting research; an Agricultural Research Fund would be established as a conduit for private sector funds;

A realigned research strategy for the period 2003-2010, which was published in 2004, identifies five research themes that are relevant to development of knowledge and skills, and thus contributing to human development:

1. Understanding people, their livelihood systems, demands and the impact of innovations
2. Enhancing the innovation process and partnerships
3. Enhancing integrated management of natural resources
4. Technological options which respond to demands and market opportunities
5. Enabling policies and linking producers to markets

Much of the current research which has been funded under NARO, however, falls under Theme 4. The outreach division of NARO, in conjunction with Makerere University and ICRA (International Centre for Development Oriented Research in Agriculture) has implemented a capacity-building programme to develop skills in integrated agricultural research.

A mid-term evaluation of the PMA reported that NARO has been successful in the production of improved technologies,

although farmers' access to these new technologies is still limited. The procedures applied by PMA and NAADS for selecting which farmers get the new technologies and how groups are chosen is yet to be clarified, clearly defined, and made more systematic. This has impacted on the level of farmer involvement in technology generation and acquisition as illustrated by Table 4.10, which shows the households that are involved in the generation of technology mainly as on-farm trials. It is clear from the table that apart from the PMA district of Arua where 20 and 36 of the 100 households are involved as farmers groups and individual households respectively, household involvement in technology generation is minimal (5-17 per cent). Furthermore, the same table reflects that participation in research and technology development is dominated by males.

Table 4.10 Involvement by Households in Agricultural Research and Technology Development

	Moyo		Arua		Kabarole		Kasese	
Particulars	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
No of h/h surveyed	60	40	63	37	68	31	70	29
No involved in developing new technologies:								
members of farmer orgn	2	0	17	3	2	1	3	0
h/h head	9	8	26	10	7	0	5	0
spouse	5	2	17	5	5	0	2	0
other h/h members	2	2	2	1	2	0	0	0
No reporting easy availability of inputs:								
improved seed	2	2	49	26	24	17	8	0
improved cuttings	2	0	23	16	17	13	3	1
improved breed	5	3	40	18	18	9	5	3

Source: PMA Mid-Term Evaluation Report, 2006.

From the above districts shown in table 4.1 as covered in the mid-term evaluation it was noted that PMA districts have much more access to basic planting materials and improved animal breeds (30-75 per cent of households), as opposed to those households in non-PMA areas (2-8%). Agricultural research and technology development, spearheaded by NARS and coordinated by the various ARDC/DFI and DATIC centres, is one pillar that appears to thrive well in an environment of information dissemination, training and community mobilisation. This is clearly an area that the PMA process has added value to at the community level.

Extension and technical services

Until the end of the1990s, the Government of Uganda provided extension services using top-down approaches that were not responsive to farmers' needs. Most of the research and extension lacked relevance and reached less than 5 per cent of the farming population. Like research and technology development, the government's adoption of the PMA framework ushered a complete review and reformulation of the extension approach geared to ensuring a system that was more directly responsive to farmers' needs, and a shift towards private sector service delivery. The new approach would result in "decentralised, farmer-owned and private sector delivered advisory services, contributing to the realisation of the agricultural sector objectives".

Three elements of the new extension policy focus on capacity-building and hence human development. These are: (1) establishment of a secretariat at the national level as a semi-autonomous self-accounting entity to limit the bureaucratic structures that hinder the flexibility and effectiveness of many public sector institu-

tions; (2) decentralisation of responsibilities for agricultural advisory services from the district to sub-county level of government and farmers – to increase the relevance and the accountability of the programme; and (3) contracting the services of agricultural advisers rather than employing them as career civil servants – to improve efficiency and accountability while promoting pluralism of approaches.

While the overall national objective is to eradicate poverty in the country, the NAADS programme recognises the need to treat agriculture as a business and, therefore, in defining its target beneficiaries emphasis is placed on subsistence and semi-commercial farmers, who have access to productive assets and have some skills and knowledge – i.e. those farmers with the potential to take advantage of the technologies introduced. Provision would be made to provide extension messages suitable for disadvantaged groups, for example, women, youth, HIV-affected farmers, and people with disabilities. The definition of the poor implied here differs from the original PMA definition, which targeted merely subsistence farmers. Others have categorised the poor in several ways (see Box 4.3).

At present, enabling poorer or more marginal farmers to access appropriate services is a significant challenge for NAADS. The formation of farmer groups is clearly one area where the PMA process has helped to add value. Farmers must join registered groups to access services. In four districts covered by the PMA Mid-Term Evaluation in 2005, about one out of every four households belongs to some kind of farmer group (Table 4.6). Membership was significantly higher in the PMA districts, (over 42 per cent of the Arua households and 35 per cent in Kabarole) than in Moyo (6%) and Kasese (39%) which were not covered under PMA at the time. In the PMA districts, NAADS, other farmer organisations and government agencies/ extension workers were cited as pivotal in farmer group formation. Even in Kasese, which is not yet a PMA district, NAADS was mentioned.

Box 4.2 Typology of Poor Small Farmers in Uganda

Poverty among small scale farmers in Uganda posits four categories with common characteristics:

- Poorest/most vulnerable: The poorest people include many female-headed households, widows with labour constraints and uneducated/unemployed youth who have insufficient food and cannot pay school fees. In the pastoralist community, they lack cattle and land, and experience food shortages, drought and insecurity. In the fishing communities, they lack fishing equipment, have no alternative employment and are food-insecure.
- Poor: The poor experience food shortages, own insufficient land, have little education and, often with a large family, barely afford basic needs like clothing and bedding. A poor household has no livestock, not even chickens, and a small house in a moderate to poor state of repair. Members will frequently work as casual agricultural labourers for the rich/better-off. The household will have no savings to pay tax or school fees beyond Primary VII. Sickness is common.
- Less poor: The less poor have access to land and sufficient family labour for production of crops for their own consumption and the sale of surpluses. They are food-secure except in years of crop failure, and able to pay school fees and basic health costs.
- Rich/better-off: The rich smallholder owns productive assets, cattle, an-ox plough and a house properly built with an iron roof. The household is food–secure, has access to savings and can pay school fees without difficulty. The farmer is frequently a produce dealer, will employ people from the lower wealth categories, sometimes pays the dowry of other family group members, has access to market information, often has been educated to Senior IV and has considerable entrepreneurial skills. Rich farmers tend to network with fellow progressive farmers with regular daily personal contacts.

Source: Bugondo Wealth Ranking (NAADS, 2004)

Table 4.11 Membership of Farmer Organisations

Particulars	Moyo		Arua		Kabarole		Kasese	
	Male	Female	Male	Female	Male	Female	Male	Female
No of h/h surveyed	60	40	63	37	68	31	70	29
Membership of farmer group (no of h/h)	2	4	29	13	23	12	22	2
Row 2 as % of 1	3	10	48	35	24	39	32	7
Who helped form group:								
- NAADS	0	0	54	46	35	20	67	0
- Other farmer organization	50	0	14	15	22	30	7	100
- Govt agencies								
- Private	0	50	18	15	4	10	0	0
- NGO	0	0	0	0	30	10	7	0
- Donor	0	0	11	23	0	0	13	0
- Other	0	0	4	0	9	20	7	0
	50	50	0	0	0	10	0	0

Source: PMA Mid-Term Evaluation Report, 2006.

Membership of NAADS-supported farmers groups is dominated by women (up to 60%), and NAADS has enabled some women to gain greater access to land. It is, however, not clear the extent to which these women 'control' the land, or are merely working on land that continues to be owned by men.

The NAADS policy to deliver extension through private service providers (PSPs) is a unique provision that opens up opportunities for the private sector to directly engage in agricultural development. The de-layering (redundancy) of public extension workers was intended to increase the number of private sector service providers that would be available to provide NAADS services. Currently, low capacity amongst PSPs is recognised as a constraint to effective service provision. Hence, NAADS includes an institutional development component to enhance the capacities of PSPs. The monitoring of performance of PSPs by farmer groups and the NAADS district technical auditing team against quantitative outputs specified in the contract for service providers is yet another confidence-building measure for farmers.

Agricultural education

Agricultural education is a priority area of the PMA, which recognised it as the primary tool of human development to achieve agricultural modernisation. The vision of agricultural education under the PMA is one in which "agriculture is treated as a business and an honourable profession, and farmers acquire knowledge and skills that enable them to increase productivity, profits so as to improve their quality of life". The rationale for including agricultural education has arisen from: (i) lack of a coherent policy for agricultural education and training; (ii) insufficient funding for agricultural education and training; (iii) ineffective institutional framework for the delivery of agricultural education and training; (iv) inappropriate curricula and teaching and learning methodologies in agricultural education and training; and (v) negative attitudes towards agriculture in general and agricultural education and training in particular.

The PMA seeks to address the availability and quality of agricultural education provision through a number of initiatives within the Second Education Sector Investment Plan (ESIP, 2004-2015) currently being implemented by MoES. The National

Agricultural Education Policy 2004-2015 (NAEP) and the National Agricultural Education Strategy and Investment Plan 2004- 2015 (NAESIP) provide the necessary policy and strategic support for both formal and non-formal agricultural education. In line with PMA objectives and the Government Education White Paper of 1992, the Vision that will guide the National Agricultural Education Policy and Strategy is: "Development and provision of quality formal and non-formal agricultural education and training for all".

The Mission of NAES is to "support, guide, regulate and promote formal and non-formal agricultural education and training to contribute towards profitable and sustainable Agriculture and Agro Industry". In pursuit of the vision and mission, the Goal of the policy and strategy shall be: "To enhance positive attitudes and practices for sustainable agriculture through the provision of quality formal and non-formal agricultural education and training at all levels".

The roll-out of the adult education pillar will contribute to the achievement of PMA objectives and consequently human development through re-orienting the people's attitude towards agriculture. In particular, agricultural education at primary schools is an important means of conveying PMA messages and practices to tomorrow's farmers. It is also hoped that children will pass on new agricultural skills and knowledge to their parents. The NSCG has supported school gardens in primary schools in PMA districts, and several primary schools have started agriculture-related teaching or formed agriculture 'clubs'. The school gardens established through the NSCG are supervised by extension services.

Functional adult literacy (FAL) is one of the key programmes in agricultural education, and adult illiteracy is a constraint to the commercialisation of agriculture. The rural literacy rate among women aged 10 years and above is 58 per cent and 74 per cent for men, and is higher in urban areas than in rural areas. The FAL Programme was initiated in 1992 as a pilot project in eight districts and has now been rolled out nationwide. Its objective is to raise adult literacy levels to 85 per cent by 2007. By 2004, FAL had over 400,000 learners enrolled, of whom 76 per cent were females. The target beneficiaries are youth and adults of 15 years and above, with a focus on women and vulnerable groups.

FAL is a decentralised programme implemented by Local Governments where Community Development Workers (CDWs) play an important role in the implementation and monitoring of FAL classes. A number of NGOs and donor agencies have been involved in FAL as well. One of the main problems with FAL is the high dropout rate. Participation of people with disabilities is low, and both men and women attendances are low, especially during the agriculture peak seasons.

The District Agricultural Training and Information Centres (DATICs) constitute an important component of agricultural education, and have the specific objective to train farmers, youths, and women in the management of profitable agricultural enterprises that can generate profit, and thus contribute to poverty eradication and increased food security. Thus, it is a key vehicle for human development. The DATICs programme is a component under the Agriculture Sector Programme Support (ASPS) funded by DANIDA. The development objective of the DATICS Component is "to reach an end state where agricultural activities and training conforming to farmers' needs are available under district responsibility".

DATICS has successfully implemented farmer field schools that are scaling up and will be included in national agricul-

tural education policy. The DATICs have also exploited demand-driven service provision in its collaboration with NARS, NAADS and others to enhance its financial self-sustainability objective – and to support PMA implementation. A Gender Mainstreaming Strategy and Implementation Guidelines have been developed to ensure equal participation of the two sexes in training and decision-making. Last but not least, HIV/AIDS concerns are given attention through the DATICS HIV/AIDS Prevention Education activities.

4.4.5 Land, Environment and Natural Resources

Land

Land reform, as well as improved management and administration are seen as contributing to the increase in production by (i) enhancing food security through redistributing land to the landless and land poor, thus giving them opportunities to be directly productive; (ii) facilitating investment and enhancing efficiency in the use of factors of production; and (iii) contributing to resource conservation by providing up-to-date inventories of natural resources and improving allocation of land to its optimal use.

Experience from other countries indicates that land reform is costly and requires significant political support. The PMA framework suggests that Uganda should concentrate on the reconstruction of land records and the Land Registry in the medium term. A Land Act was enacted in 1998, and, together with the Uganda constitution of 1995, defines land tenure systems, the processes by which land tenure can be registered and transferred (for example from customary ownership to freehold), and necessary structures at national and local levels, such as district offices, land tribunals and the Uganda Land Commission. There has been a major revision in land legislation and a Land Amendment Act was passed in March 2004 which contains new land regulations and guidelines. UNDP is assisting in the review of the Regulation of Titles Act, the Survey Act and the Land Acquisition Act. Local Governments have pushed for the revision of the Town and Country Planning Act, and a final draft of this was prepared, but it has hit a dead end over the institutional implications.

The government has formulated a Land Sector Strategy Plan (LSSP) to remove barriers to increased land utilisation, to broaden services to rural areas and customary land, to address inequality, tenure insecurity and inequitable systems and processes, to strengthen the land rights of the vulnerable and of women, to empower local governments and communities to make and implement their own policies and plans for their land, and to provide an appropriate and supportive framework for sound environmental and natural resource management. The LSSP addresses the need for a land policy, to define the range of formally recognised land rights, the distribution of those rights, and land use. An integral part of this will be a land use policy. Among the key issues identified are: the issue of raising revenues based on land taxation; the privatisation of land services (in particular cadastral surveys and land valuation); and how to deal with internally displaced persons (IDPs); and HIV/AIDS and land.

There are no easy answers to the problems posed by the current state of land tenure in Uganda. The precise nature of the issues varies according to the four land tenure systems in the country: customary, freehold, mailo and leasehold. However, there are two general concerns. Many poor farmers do not understand what their legal rights to land are, and this deters them from investing in infrastructure, perennial crops and trees, or soil conservation technologies. Where people do understand

their rights under the law, they may have no faith in local juridical systems to enforce these. Secondly, women's rights to land are still highly disputed, even though they may provide the major labour input on the land. Attempts to address this have proved controversial and have not had sufficient political support to be adopted in law. A clause on co-ownership in the Land Act Amendment was dropped because of an inability to find a consensus position. There is an absence of a shared vision of land reform.

As indicated above, steps need to be taken to improve the access of the rural poor to land, and particularly to make women's access to land more secure. unless this is done, there are going to be constraints on the ability of the agriculture sector to deliver pro-poor growth. This does not necessarily mean individuals having formal land titles, but could mean a better understanding of and support to customary rights, if these protect women's access adequately.

"Men generally decide how to use land and whether to sell it, although it was reported in a few instances that men consult their wives about sale of land. As men own land, they generally also own and control the agricultural production on that land and decide whether to sell this production and how much to sell. Similarly, because livestock is raised on land owned by men, men generally own and control the use of livestock, although their wives may control the use of smaller livestock such as chickens."

Source: PPA2 National Report

Land tenure is very important for the commercialisation of agriculture, both in terms of providing collateral for finance and allowing larger-scale production. At present it is difficult to consolidate the increasingly fragmented landholdings. Internationally equitable access to land is increasingly recognised as a necessary prerequisite for pro-poor growth in agriculture. For all of these reasons, the medium-term impact of investment in agriculture is likely to be constrained unless the land issue is addressed more expeditiously.

Water

Water and its sustainable management and utilisation is a crucial factor in agricultural production. The vision for water for production encourages availability of water all year round for increased and sustainable commercial agricultural production without degrading the environment. This is expected to involve simple water harvesting techniques, improved rainwater management and effective use of early warning systems and meteorological forecasts, rather than heavy investment in irrigation systems. Currently MWLE is the lead agency for water supply development and MAAIF is the lead agency for water use and management.

A Water for Production Strategy and Investment Plan has been drafted which sets out its principles as having: a poverty reduction focus; demand-responsive approaches; sustainability; cost-efficiency; decentralisation and management at the lowest level; private sector involvement; a gender-responsive approach; incorporation of environment and health concerns; and a sector-wide approach to planning. Meteorology services have also been improved as part of PMA support for WfP. Under various projects, both the physical and human resources available for field station services have been improved, and, as part of the evaluation of the effectiveness of meteorological forecasts, various stakeholder groups and NGOs have participated in assessing the use made of these forecasts.

Environment and natural resources

Increasing agricultural productivity without degrading the environment is one of the challenges of the government. To do this will require greater mainstreaming of the environment, improving the linkages between, in particular, environment committees and agricultural services and research, appropriate monitoring, including EIA of PMA investment interventions,

and preparation of district, sub-county, parish and village-level environment action plans. The National Environmental Management Agency has three main areas of focus that contribute to human capacity development: enhancing the environmental management capacity in districts and communities; enhancing environmental management capacity in lead agencies; and enhancing the environmental management capacity in NEMA.

There are several issues that affect agricultural performance and rural development. These relate to land, the environment and disease. As the agricultural sector becomes modernised and land becomes scare, labour is expected to be released to the industrial sector and urban areas for wage employment. Cash remittances from urban areas are important to the rural poor while food from rural areas is vital to the urban poor. The importance of urban migration and wage employment as a coping strategy for the rural poor implies that better competitiveness and information in rural areas about urban economic opportunities can help the poor.

Water, biomass, land, soil and weather are critical factors in supporting the sustainability of agriculture, enhancing rural livelihoods and reducing the vulnerability of the poor. The quantity and quality of natural resources are, however, declining as a result of inappropriate use of arable land, excessive cultivation, population pressure, inadequate fertilisation or soil erosion through removal of crop residues. This is aggravated by drought conditions, wetland encroachment and reclamation and use of hazardous chemicals in a manner that is harmful to the bio-diversity and well-being of the communities.

There is an accelerated rate of deforestation due to encroachment on protected areas, conversion of forests into crop and grazing land, charcoal burning and over-harvesting of forest resources, high population growth and ineffective law enforcement. This has a direct negative impact on the livelihoods of the poor in relation to declining wood fuel sources, the rainfall regime and increased soil erosion.

In densely populated areas such as Kabale, Kisoro and Mbale, fallow periods have become extremely short. Soil erosion is worst in the drier parts of Uganda where the naturally fragile vegetation cover has been degraded by overgrazing under nomadic pastoralism. Besides poor crop husbandry, land degradation also occurs when livestock populations per unit area of land exceed safe stocking rates and when animals are concentrated near watering points and supplementary feeding places. Increasing pressure on land and poor land use practices have led farmers and livestock keepers to invade areas gazetted for nature conservation as well as land considered marginal for agriculture. Many poor farmers now practise cultivation in wetlands, the riverbanks and shoreline, and in hilly areas that are fragile and susceptible to destruction. It is estimated that two-thirds of the total seasonal wetlands in Iganga and Pallisa have been converted to rice cultivation.

In most cases the poor are agents of environment degradation because they have limited livelihood alternatives and are victims of environmental degradation because their coping abilities are limited. The rural poor are more likely to live in ecologically fragile areas and cannot afford environmentally friendly technologies to enhance productivity and protect the environment. Women and men often have different types of relationships with natural resources due to the gender division of labour and socio-cultural factors and are affected differently when these resources decline. Women and girls are by tradition responsible for firewood collection to ensure household food security and general

welfare of the family. The increasing loss of forest cover and fuelwood shortage in many districts affect women and childrens, who have to travel longer distances to cover for the deficit. Similarly, the deteriorating quality and quantity of wetland resources could expose poor people in both urban and rural areas to further vulnerability to environmental change and narrow down the scope of alternative livelihoods.

"Use of fragile areas: It was reported that, owing to lack of land and poverty, in Ntungamo, Bushenyi, Bugiri and Bundibugyo, the poor have been forced to exploit fragile natural resources, especially steep slopes, for crop cultivation. This has increased vulnerability to disaster (e.g. landslides and flooding in the downhill flood plains) and resulted in soil erosion. Communities in Bugiri and Soroti districts identified the parent rock as a key obstacle. The soil layer on which arable crop cultivation is possible is thin, comprising mainly sandy particles and rocks, which are easily washed away once disturbed by cultivation."

Source: PPA2 National Report Page 96

Whereas agricultural and other rural activities are responsible for the degradation of the environment, growth in the agricultural sector is highly affected by environmental (weather) conditions as the sector is largely smallholder and is heavily dependent upon rainfall. The erratic and unevenly distributed rainfall is increasingly affecting output, especially of food crops. In recent years, there has also been increasing incidence of crop diseases (coffee and banana wilt) as well as animal diseases (Poverty Status Report, 2005).

4.4.6 Finance and Investments

The importance of rural finance in the acceleration and transformation of agriculture cannot be underestimated. Despite this recognition, access to finance is very restricted for the majority of farmers. Government policy is to spread sustainable financial services to underserved rural areas so as to reach as many rural people as possible. The vision is to achieve "an efficient, nationally integrated system of financial institutions and intermediaries capable of accomplishing financial intermediation in rural sectors", while the mission is to "to put in place a system and institutional arrangements that will ensure increased availability of market-based rural financial services in Uganda on a sustainable basis".

The key strategic elements of the rural finance policy are: (i) to focus on MFIs as an immediate strategy, given their comparative advantage in operating at the grassroots; (ii) to target widespread geographical outreach in terms of service points per unit area, given that agricultural production units are widely dispersed, small-scale and diverse; (iii) to target coverage of a large proportion of the rural population by MFIs; (iv) to train MFIs and their clients for effective rural finance intermediation through use of international best practices; and (v) to specifically target women groups in the delivery of MFI services.

The government's vehicle for implementing this policy has been the Micro-Finance Outreach Plan (MOP). The MOP identifies as its key priority areas: (i) a legal and regulatory framework to be spearheaded by the Bank of Uganda in collaboration with the micro-finance industry and other stakeholders; (ii) capacity-building for MFIs; (iii) privatisation of rural financial services by withdrawing direct state support and provision of credit through projects.

Recognising that the intended beneficiaries of this programme in agriculture are small farmers that need help to modernise their farm enterprises, it is evident that the envisaged appropriate and efficient agriculture finance requirement is not yet addressed by MOP. Lending to agriculture and specifically to small farmers which should be the main target beneficiaries in the light of the overall aim of PMA is still unattractive to most MFIs. Crop and animal production made up less than 15 per cent of the total MFI loan portfolio in nearly all MFIs. MFIs have concentrated

on short-term working capital loans for trading and micro-commercial enterprises with frequent loan instalments.

The bulk of the rural finance services under the MOP is not likely to benefit farmers directly, but will remain important to rural development in broad terms, from which the modernisation of agriculture could be an indirect outcome. The loan portfolio of MFIs, which are the focus of the MOP will for a long time tilt against agriculture lending. Government has recognised this problem and has continued to explore ways in which the MOP could be made more relevant to the needs of the rural sector. Innovative programmes that have been initiated now include the "Bona Bagaggawale" or "Wealth for All" Programme. Under this programme, the rural communities are organised into savings and cooperative groups known as SACCOs, and these are one of the strategies for linking farmers directly to rural finance service providers. The emergence of the SACCOs alongside or within farmer groups is a good opportunity that the MOP could build on to make rural finance more relevant to small farmers.

The Study Team found it extremely difficult to source reliable data on GoU expenditure on agriculture before 1999/2000 and impossible to develop a long-term time series using the COFOG definition of agriculture. To obtain a long-term series of expenditure allocations the Team has been forced to rely on data reported by Nygaard et al. (1997) for earlier years. The time series shows agriculture's (i.e. essentially MAAIF and excluding forestry) percentage share of the GoU-funded budget (i.e. excluding donor funding other than budget support) for 30 years from 1980/81 to 2006/07 and projected to 2009/10 (Table 4.12).

Table 4.12 shows the steady decline in agriculture's share of the GoU budget allocations through the 1980s as the nature of the economy changed under structural adjustment and inefficient and heavily subsidised parastatal farms, cattle ranches and marketing boards were sold or closed (Nygaard et al., 1997). Since 1991/92, agriculture has not received more than 3 percent of the GoU-financed budget in any year and in some years the share has been below 2 percent.

Table 4:12 **Agriculture's[a] share of GoU-funded budget[b] allocations 1980/81 to 2009/10**

Year	%	Year	%	Year	%
1980/81	9.6	**1990/91**	3.4	**2000/01**	1.6
1981/82	5.5	**1991/92**	2.6	**2001/02**	2.6
1982/83	5.1	**1992/93**	2.1	**2002/03**	2.3
1983/84	4.0	**1993/94c**	2.4	**2003/04**	2.1
1984/85	3.9	**1994/95**	2.9	**2004/05**	2.0
1985/86	3.8	**1995/96**	2.0	**2005/06**	3.0
1986/97	5.4	**1996/97**	1.6	**2006/07**	3.0
1987/88	3.2	**1997/98**	1.1	**2007/08**	3.1
1988/89	3.1	**1998/99**	1.6	**2008/09 (proj.)**	3.5
1989/90	2.2	**1999/2000**	2.6	**2009/10 (proj.)**	5.1

Source: Nygaard, D. et al. 1997 using data from Uganda Statistical Abstracts and World Bank Agriculture Report; MAAIF, 2006. Development Strategy & Investment Plan; and analysis of MTEF data.

Since 2000/01, information has been available on donor-financing of projects through the central government, although the 2000/01 figure for donor releases has never been computed. Table 2.2 shows agriculture's budget allocation as a percentage of total (GoU and donor-funded) budget allocations from 2000/01 to-date and projected to 2009/10. This raises the agriculture sector's claim on total public expenditure substantially, but it has only exceeded 5 percent in one year.

Table 4:13 Agriculture's a share of the total GoU- and donor-funded budgetb allocations 2000/01 to 2009/10

Financial Year	GoU-funded%	GoU and donor funded %
2000/01	1.6	4.5
2001/02	2.6	5.1
2002/03	2.3	4.8
2003/04	2.1	3.2
2004/05	2.0	3.4
2005/06	3.0	4.0
2006/07	3.0	3.6
2007/08	3.1	4.1
2008/09 (proj.)	3.5	4.3
2009/10 (proj.)	5.1	5.5

Source: MFPED Budget statements and (2007) National Budget Framework Paper
Note: a. Essentially MAAIF and excluding forestry

Although it is of little consolation to those concerned with the continuing low level of public investment in the agriculture sector, Uganda's experience in this regard is not out of line with many other countries in the region (Akroyd and Smith, 2007). A common feature in most countries is that there are political and other challenges that make it difficult to increase public spending on agriculture. A recent listing of these challenges by Birner and Palaniswamy (2006) includes:

- Lack of voice of small farmers and the rural poor in the political decision-making process;
- Challenges for parliamentarians who represent the rural poor to influence the budgetary process;
- Fiscal constraints;
- An image of agriculture as a "backward sector";
- Lack of knowledge about the potential role of agriculture as an engine of pro-poor growth;
- Negative experience with past investments in agriculture that were ineffective owing to governance problems;
- A short-time horizon for policy-makers and politicians; and
- Demands from other sectors which are perceived to be more urgent/deserving.

4.5 Linkage with Human Development

4.5.1 Critical Linkage

The linkage between agricultural performance with rural development and human development arises from the fact that: (i) substantial land and human resources are tied to this sector; and (ii) the sector contributes significantly to food security, national income and the balance of payments. Agriculture is still a major source of livelihood for the majority of Uganda's population and remains the engine of growth as it contributes 38.5 per cent of GDP, more than 90 per cent of the country's export earnings. More importantly, the growth of other economic and social sectors is heavily dependant on the agriculture and rural sector, including those which contribute most to human development.

Arising from previous analyses, improved and sustained agricultural performance/development and progression in the knowledge and skill of farmers are directly related. Human development in the agriculture and rural development sector entails the acquisition and building of scientific knowledge and farming skills by farmers, and is a sine qua non for sustained agricultural performance. As farmers increases their knowledge and skills, they increase their agricultural performance, and as their performance increase they not only become more confident but they also extend their horizon toward the outside world through increased transactions and contacts with traders and government agents. The knowledge and skills that result in increased production performance also bring about changes in people's attitude towards agriculture and the environment. In addition, improved health and life expectancy is associated with improved agricultural performance and transformation. In the long run this transformation generates positive backward and forward linkages with other sectors such as research,

extension services, trade, agro-processing, transport, finance and education, among others.

This assertion is consistent with the government's agricultural modernisation programme – the Plan for Modernisation of Agriculture (PMA). The PMA strives to achieve "a profitable, competitive, dynamic and sustainable agricultural and agro-industrial sector", and aims "to transform subsistence agriculture to commercial agriculture". It recognises that considerable knowledge and skills must be imparted to farmers through supporting the spread and uptake of new production-increasing technologies. Thus, the task of increasing agricultural performance in Uganda is directly linked to building human capacity through enhancing farmers' knowledge and skills. The PMA, among other strategies, promotes stakeholder participation in and ownership of the planning, implementation and evaluation of programmes, which is an essential element of human development.

The following dimensions of human development show empirically the inextricable link between agricultural performance, human development and poverty reduction, as any changes in the fortunes in these variables can either slow down or galvanize economic progress.

4.5.2 Access to and Utilisation of Land

Inequalities in access to productive land correlate with rural household food insecurity and poverty. Poorer farmers are either unable to access land or can only do so on very unfavourable terms. Specific concerns about land vary widely between regions, districts, communities and individuals, but the issue impacts on poverty through unequal land distribution, land tenure insecurity, and inequitable land structures, systems and processes. Even when farmers have some access to productive land, insecurity of tenure or the structure of tenure rights may inhibit investments such as commercialisation of agriculture through the construction of permanent structures or planting of income-generating perennial crops, such as coffee, cocoa and fruit trees.

Several reports highlight[20] the problem of limited access to land or land shortage as one of the most important causes of poverty in Uganda, both in rural and urban areas (UPPAP, 2002). Between 1993 and 2001, land ownership decreased significantly among the middle income and poorest households as this important resource increasingly became concentrated in the hands of the rich. Recent evidence suggests that this trend of events has continued to worsen, with poorer households having much smaller land sizes and increasingly becoming landless. Similarly, the rural livelihoods study conducted recently in Mbale, Kamuli and Mubende using panel data[21] reveals that land access in rural Uganda is shrinking, especially in densely settled farming areas. The typical farm sizes in 2005 were around 0.5-1.0 ha compared to an average of 0.75-1.5 ha in 2001 and 1.5-2.0 ha ten years ago. Close to 40 percent of households in the sampled districts owned less than 0.5 ha.

20 MFPED, 2002
21 Frank Ellis et al, 2006.

Box 4.3 Landlessness is associated with gender inequality and HIV/AIDS prevalence (FAO, 2004)

The gender structure of land rights is highly unequal, with women's rights generally limited to access while men are more likely to have ownership rights and women's rights being less secure than those of men. This inequality of access to the key productive asset is a fundamental determinant of poverty and social disadvantage and a major factor in vulnerability to HIV/AIDS by women. Not only do women have weaker land rights but also the rights of occupiers and of many family members (dependent children and orphans) who do not meet the criteria for statutory protection (frequently urban migrants) are likely to be vulnerable to evictions.

Landlessness often increases markedly as a result of natural disasters, particularly drought. It is likely to increase as a result of the HIV/AIDS crisis. When people become sick vital physical assets, including land, is depleted or sold off as they or their families draw on their savings to pay for medical care, funerals or the hire of labour. Once these productive assets are sold the household's livelihood options become more limited and they become increasingly vulnerable. In these processes women are especially vulnerable both to infection and, as widows, to loss of land rights and destitution following land grabbing by a local elite and relative of the deceased.

4.5.3 Gender Dynamics in Agriculture

Food crop production utilises considerable labour and land resources of the farmers. More than 60 per cent of agricultural labour is devoted to food crops, and in the vast majority of households over 75 per cent of the family labour is devoted to food crop production. Over 80 per cent of this labour is contributed by women (NARO, 2001). About 90 per cent of the total national planted area is devoted to food crops. One of the key areas of human development that is directly affected by performance in the crops sub-sector is the participation of women. Despite the fact that women provide the bulk of labour for agricultural production, they have not benefited as much as men from the decreases in absolute poverty noted in recent years. The incidence of poverty is highest among the food-cropproducing category, declining slowly among female-headed households. Women have limited opportunities for social and economic development, particularly those living in the rural areas.

Women's poverty is associated with time poverty, which hinders women's capacity to benefit from poverty-reducing programmes and renders them not easily transferable to the productive sector/market economy. As a result of time poverty, there is unequal access to agricultural support services and inputs, market information, access to credit (especially that which is based on the peer collateral approach that requires frequent participation in meetings), educational activities, etc.

Box 4.4 Time poverty and relationship with agricultural performance and human development

In Uganda, rural women work between 12 and 18 hours per day compared to men's 8 to 10 hours and thus experience time poverty (1992, IHS). 70 per cent of all the marketed produce in the country is transported by head-loading, a task that is predominantly undertaken by women. Most of this work involves travel on foot and head-or backloading.

Women many times make several journeys a day to fetch water and spend an average of 1.5 hours daily in the performance of this task (1999, UNHS). This is aggravated by long waiting times at the source, poor footpaths and the labour-and energy-intensive methods of carrying. In an attempt to reduce their time burden, a number of women have resorted to limiting household water usage to 12-14 litres per person, which is less than the recommended 20 litres, or collecting unsafe water that is nearer – both of which increase health risks for household members.

Similar challenges are evident in the collection and the consumption of fuel wood. More than 90 per cent of the total energy is biomass, mainly collected by women, a labour-and time-consuming activity (MEMD, 2003). Environmental degradation has exacerbated the magnitude of this task for rural women and children, who have to walk longer distances and to more isolated places to collect fuel wood. Coping mechanisms in some communities include consumption of one meal a day, which obviously has negative implications for the nutritional status of households.

As a result of time poverty, women face many more

trade-offs than men, and these impose restrictions on their economic choices and the enhancement and exercise of their capabilities. Time poverty hinders women's capacity to benefit from poverty-reducing programmes. The two key underlying issues behind women's time poverty are mobility and access. Bringing water, health, education, market, credit and energy services nearer to households would be the ideal.

Source: Strategic Country Gender Assessment, World Bank, 2005)

4.5.4 Environmental Degradation

Ugandan forests are disappearing at an alarming 2 per cent per year. Six thousand hectares of trees are being cut down every month, at 72,000 hectares in 2006. At this rate Uganda forest will have gone 50 years hence, and 70 per cent of the 506 forest reserves in the country are at risk of destruction. The number of people encroaching (for farming, grazing and settlement) on the forests went up from 180,000 to 220,000 between 2005 and 2006, an increase of 24 per cent.

Eastern Uganda has the highest environmental degradation in the country, where three quarters of all forests and wetlands in the Eastern have been degraded. The central region is second, with 10 per cent of the forests and wetlands destroyed. Mukono, Rakai and Luwero districts scored the worst in wetland destruction in the region. The western region ranked the third, with 8 per cent of all forests decimated, followed by the North with 7 per cent (State of the Environment Report; NEMA, 2006).

Box 4.5 Rice Cultivation in Wetlands

Rice provides a reasonable income to 25 per cent of farmers in the districts of Iganga, Kumi, Pallisa, Bugiri and Tororo. The National Wetland Programme carried out studies to answer the question of whether or not rice cultivation in wetlands is harmful to wetland functions and ecology.

Consequently due to improper management of plant nutrients, soil and eater the yield were declining. The study also shows serious damage of the biodiversity due to the destruction of natural wetland vegetation, including trees. The removal of vegetations has increased the rate of drainage of the wetland, making the water stay for shorter periods, leading to flooding, pollution and reduction in the fish yields. In light of this the Wetlands Inspection Division, in collaboration with NEMA, has prepared guidelines on where and where not to grow rice. For instance, wetland rice cultivation was recommended in Iganga, Pallisa, Kumi, Kamuli and Tororo but restricted to seasonal wetlands and the seasonally flooded fringes of permanent wetlands. The farmers in these districts grow rice under rain-fed conditions without any technical guidance from MAAIF. Drainage of wetlands for rice cultivation is forbidden (NWP, 2001).

Mabira Forest Reserve: Cutting forest cover for charcoal burning and other uses directly impacts on the farming environment and productivity of agriculture

4.5.5 Food and Nutrition Security

A breakdown of the national planted area shows that bananas take up 28 per cent of the total area planted with crops, cereals 24 per cent, root crops 16 per cent, pulses 14 per cent and oilseeds 8 per cent. Traditional cash crops and newly introduced cash/export crops take up 8-10% of the total area planted with all crops.

The rate of growth of Uganda's population is undermining agricultural growth by putting more pressure on land through land fragmentation and on the environment in general. The actual number of people living in abject poverty has increased to 10.6 million from 7.5 million because of the rapid population growth. This means that the agriculture sector needs to grow fast enough to provide more food to feed the increasing /growing population. It is also necessary for the government to enhance labour productivity, foster diversification of the economy for industry and services to absorb the excess population from agriculture and take other measures to curb unemployment, which is the main cause of poverty.

The poor performance of the food subsector has resulted in continued problems of malnutrition and pockets of famine and hunger in the country.[22] The prevailing levels of childhood under-nutrition and malnutrition are high, accounting for 40 per cent of all deaths of children before the age of five (FEWS-NET). The UNHS 2006 also reveals that 8 per cent of the households took one meal a day, while in 10 per cent of the households children aged less than 5 years do not take breakfast. Food insecurity and vulnerability remain worse in north and eastern Uganda.

Although some incidents of food shortage occur in some parts of the country, the country as a whole is self-sufficient in food staples, and is not heavily dependent on the import of grain staples (such as rice or wheat) to ensure food security. Nevertheless, there are some significant imports, especially of vegetable products and cereals. For instance, in 2005 total food imports represented 11 per cent of the total import bill per year. During the same year cereal imports were 6.9 per cent of total imports and 62 per cent of food imports.

4.5.6 HIV/AIDS and Disease Prevalence and their Impacts

A healthy workforce is crucial for meeting the challenges of transforming the agricultural sector, while poor health results in low work output, high health costs and premature death with associated expenditures and loss of household incomes. Disease prevalence in Uganda increased from 29 percent to 40 percent between 2002/03 and 2005/06. Malaria is the leading cause of illness and death in Uganda, while TB remains endemic, especially among HIV-infected persons.

Despite the sustained declining trend of HIV/AIDS prevalence, the epidemic is a significant threat to human and economic development and one of the major causes of morbidity and mortality in Uganda. The epidemic is threatening the productive workforce in agriculture, eroding food security, rural livelihoods and the national economy, and exacerbating rural poverty. Further, HIV/AIDS-infected and-affected individuals and families divert financial and human resources to HIV/AIDS and related illnesses instead of investment in agricultural inputs and improved farming technologies. Recent studies (MAAIF, 2004) revealed that HIV/AIDS-affected fishermen were shifting to less labour-intensive techniques such as shallow-water fishing instead of sailing to deep waters where there is more fish. HIV/AIDS and nutrition have a cyclical relationship; that is, it worsens the nutrition status of the family or household. It is therefore important to

22 Poverty Status Report (2005)

promote nutrition education and interventions in HIV/AIDS and assist households to sustain people living good nutrition status.

Currently, about 1 million Ugandans are living with HIV/AIDS, the majority of whom live in the rural areas and being self-employed in agriculture. HIV/AIDS tends to affect the most productive age group in terms of repeated periods of illness, which reduces the labour available for agriculture. Also of concern are the persistent differences in HIV prevalence for young men and women aged 15-24 which are respectively, 2.4 per cent and 5.6 per cent at end-2001. HIV/AIDS imposes significant demands on women's time as they must take on additional care activities related directly to the pandemic. This constrains their labour availability for increased agricultural and food productivity.

The scourge has distorted the family structure and gender roles, causing an increase in female-headed households, child-headed households and grandparents-headed households, all of which have had a bearing on agricultural production. The epidemic slowly depletes the asset base of the widow-headed households owing to increasing distress sales and the loss of property following the death of a spouse. This leaves them with inadequate resources for production, thus affecting household income and nutrition.

The fishery communities are more vulnerable than other sub-sectors in light of their lifestyle and irregular settlement patterns and their being paid in cash makes them particularly vulnerable. Many women and men in fishing communities are living alone, away from their families and social norms. Recent studies (MAAIF, 2004) revealed that the affected fisher folk were shifting to less labour-intensive techniques such as shallow water fishing instead of sailing to deep waters where there is more fish. Others were reducing time on maintaining fishing boats, nets and other equipment, while women were shifting to sun-drying fish instead of smoking them whereas sun-dried fish have a lower market value than salted and smoked fish.

At the agricultural institutional levels (central and local government), the impact of HIV/AIDS is manifested in increased morbidity and death of skilled and non-skilled staff, reduced staff performance and increased medical bills and burial costs, which all affect the pace of planning, implementation and monitoring of agricultural programmes, including generation of research and adoption of technologies. At community and household levels, HIV/AIDS depletes the most productive workforce in the crop, livestock, and fisheries communities leading to loss of farming knowledge and skills and slow adoption of technologies.

4.5.7 The Northern Question

Most welfare indices are poor in the North largely because of the presence of conflict and weak state institutions.

- **Income Poverty:** Income poverty has not declined as compared to other regions of the country. The proportion of poor people who are unable to meet their basic needs declined modestly from 72 per cent in 1992 to 60 per cent in 1997 and has since stayed high at 64 per cent in 2002.
- **Literacy:** There are wide regional disparities in literacy rates: the central region - 80 percent; western region -74 per cent; eastern region – 63 per cent; and northern region - 56 percent. Gender disparities also exist: males – 72 per cent and females – 42 per cent[23].
- **Primary Education:** The majority of districts are lagging behind in terms of pupils' ability to complete primary education and service provision is the worst in the Karamoja sub-region.

23 Uganda National Household Survey 2002/2003.

- **Water and Sanitation:** Based on the 2004 DWD-MIS,[24] Kotido, Pader, Yumbe have an estimated coverage of 20 per cent - 40 per cent of clean water supplies while the majority of the other districts have an estimated coverage of 40 per cent - 60 per cent which is close to the national average.
- **Health:** infant, child and maternal mortality remain high nationally, having increased between 1995 and 2000. Disaggregated by region, the mortality rates were much worse in the north. The rates for Gulu, Kitgum, Pader are CMR of 1.54/10000 and U-5 MR 3.18/10000 (July 2005 MoH) and CMR for Karamoja is 3.9/10,000 (MoH August 2004). One of the factors affecting poor health and income indicators is the increase in female fertility rates.
- **Female Headed Households:** The conflict in the north has resulted in more abductions and higher death rates of men, leaving behind female-headed households. These female-headed households are composed of young and old dependents and orphans, with few working-age individuals, making FHH more prone vulnerable to poverty since they cannot provide food, reasonable shelter, education, health and vital social services to their dependents. Consequently women in northern Uganda are taking on male roles in both agricultural production and marketing. Insecurity in northern Uganda is also cited as a major bottleneck in the progress towards the MDG. Insecurity has impended economic activities, reducing and destabilising households' incomes from farming as a result of displacement and loss of oxen. There is also growing evidence that war and civil unrest endanger and intensify violence against women in the home. As people are being encouraged to return to their homes, it is essential to understand the specific roles and responsibilities of women and men in agriculture and their main constraints and needs as well as their ability to sustain their family's livelihoods.
- **HIV/AIDS:** Although Uganda has seen adult HIV prevalence fall from an average of 18 per cent in 1992 to 7.0 per cent in 2005, HIV/AIDS prevalence in conflict-affected areas of northern Uganda is still high: north central -9 per cent; north east - 4 per cent; northwest - 3 per cent. Prevalence among women is higher than men, (10 per cent and 8 per cent, respectively)[25]
- The National Peace Recovery and Development Plan for Northern Uganda (PRDP) is a commitment by GoU to launch a national programme with the overarching intention to stabilise the north. The commitment is to improve socio-economic indicators to bring them into line with national ones in those areas affected by conflict and a serious breakdown in law and order. The targets and objectives in the PRDP are to contribute to the overall objectives of the PEAP. At the end of three years the targets of the PRDP will be reviewed and set in line with national goals of the PEAP.

4.5.8 Water for Production and Consumption

Water is a critical input in economic production and the water sector plays a pivotal role in driving growth in other sectors. Water for production is critical for increased production of crops, livestock and wildlife, aquaculture, and rural industry whereas water for consumption is equally critical in improving human capital – addressing issues of sanitation and women time poverty

24 DWD MIS
25 Annual Health Sector Performance Report 2004/05. Based on the Sero-survey

Box 4.6 Contribution of Water to Human Development and Women Empowerment

The provision of adequate drinking water is just one aspect of the role played by water in meeting basic needs and contributing towards all the MDGs and PEAP pillars and human development in a number of ways: particularly health and well-being outcomes, which encompass domestic hygiene sanitation facilities help to ensure the safe disposal of human waste and reducing diseases, improving livelihood activities, including crop and animal husbandry.

There are pertinent gender concerns in water sanitation and the role of women in the management of water for production, consumption, sanitation and hygiene is vital. Improvement in sanitation allows women and girls to enjoy private, dignified sanitation. Improved access reduces the burden on women and girls from looking after sick children and siblings and carrying water, giving them more time for productive and educational activities as well as leisure. It also reduces the risk of assault, harassment and the dangers of snake bites.

Improved sanitation also correlates decline in infant and child morbidity and diarrhoeal with diseases which are caused by unsafe drinking water and inadequate sanitation and generate high health costs relative to income of the poor. Therefore access to safe drinking water and adequate sanitation helps to reduce household expenditures on health care. Health people are better able to absorb nutrients in food than those suffering from other water-related diseases, particularly parasitic intestinal infections that rob them of their calories. Adequate treatment and disposal of waste water results in decrease in environmental contamination by faeces which contributes to better ecosystems conservation and prevents contamination of ground water (Press Release, Ministry of Water and Environment, 2007).

4.5.9 Population Issues

Population growth is a major issue for poverty reduction, with implications for agricultural productivity, putting pressure on landholdings and other natural resources, reducing productivity in crops, livestock and fisheries, and rendering many farming households food-insecure. Population growth is most rampant among the poor population where the future is uncertain, perpetuated by low literacy rates, huge disparities in income and non-existent property rights. Besides poor access to family planning services, poor families may desire large families for the purpose of accumulating labour. Progress is being made with family planning interventions and awareness-raising campaigns. Consideration is being given under the draft Domestic Relations Bill to require husbands who wish to marry a second wife to obtain the consent of their first wife.

4.6 Government's Agriculture and Rural Development Strategy

Rural development is at the centre of poverty reduction efforts in Uganda. Recognising that the pervasiveness of poverty prevents effective economic growth, Government launched the Poverty Eradication Action Plan (PEAP), which has become the Comprehensive National Development Framework for Uganda's economic development policy.

4.6.1 The PEAP

The PEAP, which was first launched in 1997 and is revised every three years, is a national manifesto mirrored in the Millennium Development Goals (MDG). The current PEAP was revised in 2003/04, and is structured around five overarching goals. The five pillars and their areas of focus are shown below:

Table 4:14 Pillars and Focus of PEAP

PILLAR	FOCUS
1. Economic management	Macro-economic stability, fiscal consolidation and promotion of private sector investment
2. Enhancing production, competitiveness and incomes	Modernisation of agriculture; preservation of the natural resource base; and development of infrastructure, including roads, power and railways
3. Security, conflict resolution and disaster management	Ending rebel insurgency and cattle rustling, handling internal displacement in conflict areas and managing natural disasters
4. Governance	Human rights and democratisation; development of a better legal system; transparency, accountability and elimination of corruption
5. Human development	Primary and secondary education; health, including family planning; community empowerment; and adult literacy

Source: PEAP 2004, Ministry of Finance, Planning and Economic Development.

The PEAP is based on the principles that: (a) the public sector's role is to intervene in areas where markets function poorly or would produce very inequitable outcomes; (b) where the public sector intervenes, it should use the most cost-effective methods, including the use of NGOs for service delivery where appropriate; (c) poverty eradication is a partnership and should involve the closest possible integration of the efforts of government with its development partners; (d) all government policies should reflect the importance of distribution considerations, of gender, of children's rights and of environmental impacts; and (e) each area of public action should be guided by the formulation of desired outcomes and the designs of inputs and outputs to promote them.

Each pillar addresses cross-cutting issues, particularly gender, HIV/AIDS and the environment. The PEAP has a very broad agenda and scope, and concentrates attention on key issues at a high and strategic level, and is more of a policy framework for poverty reduction than a plan of action. Since its inception, the PEAP has been the major guide to resource allocation between and within sectors. It is intended to be a "living" instrument responding to experience, with a four-stage cycle: GoU prioritises its development goals: selected activities are undertaken with support from DPs and CSOs; stakeholders evaluate progress towards PEAP outcomes each year; and GoU revises the PEAP for the next phase.

Uganda is a signatory to the Millennium Development Goals (MDGs), under which a number of targets have been set that both developing countries and development partners are committed to achieving by 2015. The country remains committed to achieving these targets that are fully consistent with Uganda's national priorities. Uganda is likely to achieve some but not all of the Millennium Development Goals (MDGs). The targets related to the completion of primary education, the achievement of gender equality in secondary education and the reduction of child and maternal mortality rates are unlikely to be met. Recent analyses suggest that Uganda may require additional resources if it is to meet its targets. For example, estimates compiled in 2003 suggest that full implementation of the 2004 PEAP would require government spending to increase by 63 Per cent. More recently, the Uganda Millennium Project case study estimated that external budget support averaging US$1.64 billion each year over the period 2005–2015 would be needed to meet the MDGs.

Box 4.7 **Progress made towards the attainment of the Millennium Development Goals (MFED, 2006)**

Eradicating Extreme Poverty and Hunger: Progress in the last 5 years (2002-6): Uganda targets to reduce income-poverty headcount from about 56 per cent in the early 1990s to about 28 per cent in 2015. GDP growth rate has grown from 5.8 per cent, from 4.7 per cent and per capita GDP from 2.2 per cent and 1.2 per cent, annual economic growth rate 5.6 per cent, inflation less than 10 per cent. Poverty reduced from 56 per cent in 1992 to 31 per cent in 2006 while the economy evolving towards the service and manufacturing sectors

Achieving Universal Primary Education: Currently 86 per cent of school-age children are enrolled in primary schools, including the girl child, those with disabilities as well those from geographically and educationally disadvantaged areas. Financing has increased from 2.1 per cent GDP in 1995 to 4.8 per cent of GDP in 2003/2004, share in the national budget from 19 per cent in 1995/96 to 26.8 per cent in 1998/99

Eliminate gender disparity in primary and secondary education, preferably by 2005, and at all levels by 2015: Owing to the affirmative provisions,the gender enrolment gap has narrowed as the proportion of girls in total enrolment in primary schools improved to 49 per cent in 2004 from 44.2 per cent in 1990, while at secondary level has increased from 37.2 per cent in 1990 to 45 per cent in 2003 and to 46 per cent in 2004. Expected to increase with the advent of Universal Secondary Education.

Women Empowerment: Status and Trends: Uganda ranks 48 out of 115 in attaining gender quality with 24.7 per cent representation in Parliament. Affirmative action is used to reduce gender imbalances in higher education, governance, politics, and management. Affirmative action in education has favoured women in university and other tertiary institutions, leading to an increase from 31 per cent in 1993/94 to 40 per cent in 2002 and to 42 per cent in 2004.

Reducing Child Mortality: In Uganda the infant mortality rate is 77 deaths per every 100,000 birth and is still the highest in the world. Commitment to reduce the IMR to 78 deaths per 1,000 live births by 2002 was not attained and stagnated at about 88 deaths per 1000 live births during the period 1990-2000 while the under-five mortality rate marginally declined from 167 to 152 deaths per 1,000 live births during the same period. If the country is to remain on course to meet the MDG target of 31 deaths per 1,000 live births by 2015, the IMR must reduce by more than half in 6 years (2009- 2015)

Reduction of HIV/AIDS Prevalence: At the current prevalence rate of 7 per cent, Uganda has already attained the international target which is attributed to early intervention, political leadership, strong focus on prevention, application for a multi-sector approach and large-scale resources from PEPFAR and the Global Fund. Malaria and Other diseases (Tuberculosis-TB): Malaria is the leading cause of illness and death in Uganda, killing over 70,000 children annually, and it accounts for over half of all out-patient visits to health facilities. TB remains endemic, especially among HIV-infected persons. With an estimated 80,0000 new cases of TB occurring in Uganda annually, Uganda continues to lag behind in meeting the global target in detection and treatment of TB cases.

Sustainable Access to Safe Drinking Water: The distribution during the 2005/06 has been unequal with 95 per cent in urban, 54 per cent during the survey period, central region had better access (66%) than other regions, the lowest was northern Uganda. Provision of adequate drinking water contributes to health and well-being outcomes in terms of domestic hygiene, safe disposal of human waste, reducing diseases, improving livelihood activities, including crop and animal husbandry. In some rural areas , adequate access remains a major challenge and a concern for women and girl children who collect water from a distance of 5 km from the homestead, taking 1.5 hours daily, this is aggravated by long waiting times at the source, poor and insecure footpaths and the labour-and energy-intensive methods of carrying water

Access to Basic Sanitation: Generally Uganda is off track as access to basic sanitation stands at 55 per cent for urban and 42 per cent for rural areas. Recent surveys indicate about 26 per cent of households lacked kitchens and that garbage disposal was inadequate in both rural and urban areas. In rural areas, makeshift bathrooms were common (37%) while in urban areas outside bathrooms (52%) and shared covered pit latrines were prevalent, while close to 75 per cent of rural and 60 per cent of urban households lacked hand-washing facilities after toilet use. Improvement in sanitation allows women and girls to enjoy private, dignified sanitation and collates to the decline in infant and child morbidity caused by diarrhoea.

Slum Improvement: 15.4 per cent of the Ugandan population lives in the urban areas but 93 per cent of these live in slum-like conditions and are thus vulnerable to health hazards, lack safe water, and sanitation facilities. There are more female-headed households in slum areas than in any other areas and they continue to suffer gender discrimination. Likewise, children living in slums suffer from different forms of deprivation, such as lack of good education, exposure to disease and inadequate food.

Environment Sustainability: Uganda is currently off track as the natural resources are declining leading, to food shortages and increased pressure on water and pasture, especially in north-eastern Uganda. The forest cover has declined over the years, with negative repercussions for biodiversity conservation, water regulation and agricultural productivity.

4.6.2 The PMA

In Uganda, agriculture development has been approached through the Plan for Modernisation of Agriculture (PMA). The PMA provides the strategy and operational framework for modernising the country's agricultural sector. It delineates the appropriate roles of the different stakeholders and defines priority intervention areas that are consistent with the promotion of the private sector. The vision of the PMA for the agricultural sector is stated as "a profitable, competitive, dynamic and sustainable agricultural and agro-industrial sector". The mission of the PMA is "to transform subsistence agriculture to commercial agriculture". The specific objectives of the PMA are to eradicate poverty, ensure food security, create gainful employment, and manage the resource base on a sustainable basis.

To achieve the PMA objectives, the following strategies have been agreed upon by stakeholders through a participatory and consensus-building process: (a) deepening decentralisation in public service provision; (b) increasing stakeholder involvement in and ownership of the planning, implementation, and evaluation of programmes; (c) reducing public sector involvement and supporting development of the private sector in all commercial activities; (d) supporting the spread and uptake of profound technologies; (e) addressing food security issues through the market rather than through self-sufficiency; and (f) addressing gender issues in public service design and delivery.

The PMA (2000) emerged from the second pillar of the first PEAP as a holistic framework for eradicating poverty through multi sectoral interventions. The main aim of the PMA is to increase rural incomes through improved agricultural productivity supported by rural financial services, greater care of the natural resource base, improved market and transport infrastructure, market institutions, enhanced agricultural skills and the creation of on farm and off farm employment. The PMA is not targeted at supporting the poorest people, whose needs are best addressed with welfare transfers, but rather at enabling the mass of subsistence producers to progress.

The underlying principles of the PMA, with which sectoral planners and implementers are expected to comply, are: a focus on rural poverty; GoU sectoral role limited to public goods, market failure or regulatory functions; decentralisation; empowerment of local communities and the poor; integrating gender and other cross-cutting issues; private sector provision of goods and services; and a multi sectoral approach to agriculture.

The PMA has transformed and widened the scope of the agricultural sector policy, to embrace agriculture and rural development, and to involve the private sector more vigorously. The PMA has identified and separated clearly priority areas of action by the public sector to include: (a) Research and Technology Development; (b) National Agricultural Advisory Service; (c) Agricultural Education; (d) Improved

Access to Rural Finance; (e) Agro-processing and Marketing; (f) Sustainable Natural Resource Utilisation and Management; and (g) Physical Infrastructure. The private sector will be empowered through their involvement in sector plans and by being contracted for direct service delivery of public services to farmers on a commercial basis. Opportunities will also be explored for the involvement of the private sector in research and delivery of advisory services.

Several of the pillars relate to multiple institutional stakeholders and all rely on the compliance and budgets of sectoral agencies, NGOs and DPs for realisation. So far, only the second pillar – advisory service delivery – has attracted the necessary funds and commitment, largely because NAADS has substantial external funding for the time being.

Like the PEAP, the PMA is subjected to a participatory annual review process, presided over by MFPED. The 2005 meeting reiterated the fact that, nomenclature notwithstanding, the PMA is also a policy framework rather than a time-bound investment plan. The PMA is embedded in the public sector and so has to compete for domestic and DP funds with other GoU commitments. With indifferent support from major spending units and some politicians, the PMA has lost momentum and is now in danger of losing credibility as a dynamic campaign dedicated to delivering tangible results in poverty reduction.

A detailed evaluation of the PMA in mid-2005 concluded that the basic conceptualisation of the Plan – that rural poverty is most effectively addressed through promoting the commercialisation of agriculture and, in particular, serving as a co-ordinating framework for the provision of support services and public goods in rural areas – remains valid (Oxford Policy Management, 2005). At the same time, however, the study noted, there has been confusion over the function of the PMA, highly uneven rollout of pillars reducing impact, weak coordination at the local government level and insufficient emphasis on some of the identified constraints and weaknesses in implementation that must all be addressed.

Poverty and Equity Targeting Within PMA Pillars

The PMA is committed to targeting the economically poor farmers and to addressing the gender, HIV/AIDS and the environment. Consequently the PMA has adopted gender sensitivity as one of its key principles and recognises that persistent gender inequalities hamper agricultural activity and economic growth. The PMA acknowledges the importance of gender mainstreaming to the realisation of its objectives and recommends that all associated interventions are gender focused and gender-responsive. The mid-2005 evaluation, however, revealed that these cross-cutting issues have not been not effectively integrated in the activities undertaken within the PMA pillars. The PMA components/pillars are at different stages of implementation and the level of sensitivity to gender/equity and poverty targeting also varies, as indicated in the table below.

Box 4.8 Accomplishments and Challenges in Addressing Gender and Equity Concerns by PMA

PMA COMPONENT	Achievements	Challenges
NAADS	• Rolled out to 63 districts including those in Northern and Eastern Uganda • Poverty and gender strategy developed • Gender implementation guidelines developed and being used by service providers • Rural development strategy implemented to give additional inputs • Deliberate efforts to include the youth	• The vulnerable group farmers left out by service providers and Non-Sectoral Conditional Grant (NSCG). This contradicts the principle and mission of PMA. • Group formation in pastoralist and IDP camps still problematic • Limited capacity by the service providers to integrate gender and budgets to roll out • Enterprise selection excludes food crop enterprises and this may compromise food security and reinforce gender inequalities • Coordinate with NARO and finance services providers in the production of Affordable technologies
Agricultural Research & Technology	• National agricultural research policy • Zonal research institutes to address specific geographical concerns • Gender task forces established • Capacity for researchers and staff built to integrate gender and equity • Local variety improves to enhance household food security • Gender-sensitive labour-saving technologies- lightweight developed for women, elderly and PWDs • Immune-boosting varieties promoted to address the nutritional needs of pregnant women and people living with AIDS	• Scale up time-and labour-saving technologies in various parts of the country through various waysØ Work with various programmes, especially the micro-finance institutions so that the women can afford buying them • Scale up socio-economic research
Agro processing and Marketing	• Women and men are sensitised to form groups. And women are more active in formation of groups and cooperatives	• High cost of technology for agro-processing, limited access to markets and productive resources • Limited capacity to integrate gender in trade activities
Rural Finance	• 'Bonna Bagaggawale' launched and 48 financial extension workers recruited	• Portfolio for agricultural financing low (4%) • Guidelines for targeting the poor need to be developed
Natural Resource Use and Management	• Gender monitoring baseline survey conducted by land sector • Systematic demarcation and titling of land to protect squatters including women	• Land boards not formed in various districts. Land disputes among the formerly IDPs. • Deforestation and its effectØ Water scarcity and effects- see later.
Physical Infrastructure	• NUSAF has introduced labour-based environment restoration • Community access road has improved access to and inputs and health services. • Labour markets based works promoted to employ the poor women and men	• Community access roads are in sorry state, while rural electrification is only 5 per cent • Increase funding for district roads and non-motorized transport for women • Alternative and affordable sources of energy crucial
Agricultural Education	• Gender-sensitive national agricultural education policy and strategies approved • Agriculture included among the core subjects at secondary and PTCs. Use will reinforce this • Functional adult literacy is attracting women to learn	• The school dropout of girls and boys will not benefit • The attendance of men in FAL s is low • FAL to include enterprise formation, agriculture, marketing and book -keeping

Source: PMA (2006)

4.6.3 Prosperity for All

A key focus of the government is to fight poverty at all levels, in both rural and urban areas. There have been a number of efforts in this area delivered through different government initiatives such as the Market Research and Development Programme (MRDP) implemented by the National Planning Authority (NPA). Under this strategy, the Sub-County Development Programme (SDP) is being promoted to deliver an agricultural marketing system to enhance the incomes of small-and medium-scale farmers within the context of the government's rural development and agricultural zoning strategies.

One of the ways to ensure that poor people in rural areas are empowered sustainably in eradicating poverty at the household level is to implement a product-market based approach to poverty eradication (PMBA). The PMBA is a multi-faceted approach to poverty eradication (PMBA) built on the following principles: a) a "one village (area) one crop policy"; b) the entire value chain of the product is studied from producer to consumer to determine entry points for government intervention in order to enhance output, competitiveness and increased access to international markets; c) commitment to intervene in areas of production at the firm level and value addition.

The plan to achieve "Prosperity for All" aims to raise the incomes of households through increasing access to land, labour productivity, access to capital, and improving the economic organisation of farmers. Over the short to medium term, households will be supported to access planting materials, breeding stock, extension services, marketing infrastructure, and rural financial services. The linkage between farmers and processors as well as processing capabilities will be enhanced with the industrial development interventions.

At the community level, the government is building an effective supportive community infrastructure in the form of roads, water, educational institutions and health facilities. These will be complemented by community information systems to enable the communities themselves to generate information for use in planning and service delivery.

5

SOME ISSUES AND POLICY RECOMMENDATIONS

CHAPTER 5

SOME KEY ISSUES AND POLICY RECOMMENDATIONS

5.1 Global Issues for Policy-Makers

This report has demonstrated the linkage between agricultural productivity, rural development and their impact on human development. This chapter limits itself to those areas that have been identified as having an inextricable link to human development. It also articulates that the agriculture and rural development sector remains the key to socio-economic transformation and, consequently, to national poverty reduction.

In order to contribute to poverty reduction, improve human and welfare indicators, poverty reduction and human development strategies must therefore be based on approaches that link agriculture with other sectors – institutionally, organisationally and operationally at all levels, from the farmer up to the food shelf/market. This would strategies would enhance progress in all sectors to improve production, infrastructure, social services, and marketing, while at the same time improving the well-being of especially smallholder farmers.

To enable the achievement of a positive interface between agricultural performance and rural development with human development, Government should expedite the formulation of a National Agricultural Policy that addresses the key issues of access to and utilisation of land, soils, irrigation, financing, mechanisation and accelerated orientation towards the new farming systems – the agro-ecological zones. This is especially so because agricultural interventions in Uganda remain largely programme-or project-type interventions (see PMA, NAADS, APEP, ASPS, AAMP, NWSHP), and this has over time constrained the realisation of the sector activities' wider impacts on human development.

5.2 Some Key Issues and Recommendations

5.2.1 Investment in Agriculture and Rural Development

The challenges arising from investments are largely from the private sector. Hence the persistent outcry that funds are inadequate may be a result of poor allocation and prioritization.

On budget execution, the issue of the untimely release of funds and procurement delays adversely affects the use of funds to provide the goods and services envisaged during the planning process. This issue needs to be addressed to improve implementation.

As the NAADS Programme rolls out to cover all sub-counties, the unresolved problem of de-layering extension workers is coming to the fore, as scarce resources are being used to run parallel systems, whatever the current justification may be. It is important to have one system and address its associated problems (e.g. prioritisation of fewer enterprises and farmers not yet registered with NAADS) within that system.

5.2.2 The Northern Question

The sub-regions of Acholi, Lango, West Nile and Teso have adequate rainfall throughout the year and good soils which sustain both crop and animal production. The districts of Gulu and Kitgum have some 20 per cent of Uganda's arable land. Before the armed conflict, these areas used to produce surplus food crops that were sold in other parts of Uganda. Land has not been used productively for a long time because of the conflict. The population has been unable to contribute to the country's revenue base and development owing to lack of gainful employment and agricultural output. The displacement has also discouraged internal and external investment.

The Karamoja sub-region is semi-arid, characterised by one wet season and long dry spells. Such climate is not conducive to sedentary arable/ dairy farming. Consequently, the Karimojong are pastoralists. Pastoralism is an extensive, low input-low output subsistence-oriented production system whereby livestock owners have to move far away from their homes in search of pasture and water.

Recommendations

Based on the foregoing, the agriculture and rural development sector remains the key to socio-economic transformation, and consequently to poverty reduction in the country. Poverty reduction and human development strategies must therefore be based on approaches that link agriculture to other sectors at all levels, from the farmer up to the grocery shelf.

It is critical that a deliberate focus is placed on stimulating production and marketing in the North in order to move agriculture from being largely subsistence to medium-scale farming, thus benefiting larger communities. This will require sensitisation and extension of advice to farmers on the effective use of land for the rehabilitation of all the crop sub-sectors.

Northern Uganda, which has been affected by war for the last 20 years and is now lagging behind the rest of the country, with its suitable agro-climatic environment for the production of edible oils (such as sunflower and groundnuts), including bio-diesel. Key institutions such as the NPA and NAADS should be supported to undertake value-chain development in the region-thereby revitalising the local communities that are linked to the national economy.

5.2.3 Knowledge and Skills

Technological innovation

The goal of agricultural research is the "generation, adoption and dissemination of appropriate and demand-driven technologies, knowledge and information through effective, efficient, sustainable, decentralised and well-coordinated agricultural research system". In order to provide strategic institutional plans to implement research and technology development, a national agricultural research policy was formulated revised in 2003 and approved in 2005. Considering that PMA was established in 2000, the delay that was experienced before the National Agricultural Research Systems (NARS) Bill was reformulated and approved in 2005 has negatively impacted on the timely operationalisation of the agricultural research policy. While the restructured NARS is now well-placed to develop research processes that are more participatory and all-inclusive, its performance will depend on customised packaging and dissemination of information, education and communication of research outputs. In light of the removal of the public-supported traditional extension system to NAADS, the IEC remains a critical link to technological knowledge diffusion especially to smallholder farmers.

Although significant achievements have been recorded in training and capacity-

building, particularly at zonal level, there has not been much effective coordination between the NARIs and ZARIs in sharing the best past practices in the development of improved seed varieties and their responsiveness to poor farmers across the country's agro-ecological zones.

Recommendations

Support should be extended to technology development and multiplication, where emphasis should be placed on responsive commercial orientation and customised packaging and dissemination of agricultural best practices to poor rural farmers. Government should support socio-economic and strategic research, which would meet the needs of poor farmers, incorporate gender analysis and address biotechnology and genetic resource conservation.

Appropriate farm power and post-harvest technologies, including agricultural transport and marketing, should be accorded high priority in funding and institutional support. In order to restore and increase soil fertility in a sustainable manner, appropriate land and water resources management practices and technologies should be identified, developed and disseminated to the rural masses.

5.2.4 Extension and Technical Services

Since its inception in 2001, the National Agricultural Advisory Services (NAADS) have devised an innovative extension services delivery approach that largely uses private service providers (PSPs) and has replaced public agriculture extension services. This approach targets the development and use of farmer institutions and, in the process, empowers farmer groups to procure advisory services, manage linkages with marketing partners and conduct demand-driven monitoring and evaluation (M&E) of the advisory services and the corresponding impacts.

While the NAADS implementation approach (especially the outsourcing of the PSPs) is consistent with the PEAP, the effectiveness of the approach has been constrained by the omission of NAADS structures from the Local Government restructuring programme. In addition to this omission, the PSPs and farmer groups are discouraged by the farmers' contract periods being shortened from one year to as short as three months in some cases.

In spite of the fact that NAADS disbursements to PSPs contracts stood at 71 per cent in 2003/04, the low capacities of the PSPs and farmer groups remain a crucial factor that needs urgent attention if provision of effective extension services to farmers is to be realised.

The support to the rural poor by NAADS needs to be refocused because the current approach to non-traditional (or new) enterprises has tended to exclude the poorer, more risky averse farmers, for whom improvements in traditional crop technologies could yield significant benefits. This is critical especially where productivity-and income-enhancing opportunities available to farmers are constrained by institutional weaknesses in the areas of marketing of inputs and produce, and agricultural financing. Also, ensuring poorer or more marginal farmers access to appropriate services is a critical challenge for NAADS. The new approach requires farmers to join registered groups in order to access the range of services whereas even the very poor farmers are least likely to be members of such groups.

A similar challenge is encountered by the new approach in addressing the needs of the elderly or those affected and infected by the HIV/AIDS, who have limited labour efforts. In view of the fact that services that used to be provided by the traditional extensionists (due to be phased out) offered a range of technological options to

poor farmers and were more responsive to their needs, NAADS, in applying their new approach, should be selective and cognisant of this phenomenon.

Recommendations

Differentiated strategies for farmer categories should be developed for each pillar and the Non-Sectoral Conditional Grant (NSCG). The strategies should ensure that the particular concerns of marginalised farmers (women and HIV/AIDS) are addressed. To enable smallholder farmers to cope with the agricultural modernisation process, NAADS should be encouraged to focus more on the low value crops, which currently is a preoccupation of the poor rural farmers.

The role of NAADS in input distribution should be directed to cases where public distribution of inputs can be justified on the basis of short-term needs, for instance in post-conflict Northern Uganda, or areas of high population displacements.

The target groups of NAADS are poor farmers (including women farmers), organised into groups (30 per cent to be women's groups) and gender is a cross-cutting factor that is related to all aspects of agricultural advisory service delivery. Gender mainstreaming has not been effective by merely targeting a certain percentage of women farmers groups as recipients; equally important for redress is the gender sensitivity of (private sector) service providers whereby farmers prefer male extensionists, the responsiveness (even using local dialects) of extension messages to diverse categories of both women and men farmers, the timing and venue for extension delivery and sensitivity to the multiple responsibilities of female farmers and to the non-farm activities of both women and men and farmer activity selection to include food-related enterprises.

NAADS should revisit the approach to farmer-targeting by ensuring inclusiveness through addressing the needs of farmers who are not able to join a group for various reasons, for example, for those who have limited access to productive assets.

Training and capacity-building should be accorded urgent attention to reorient the agriculture service providers to the government's new approach on rural development strategy that mainstreams gender, HIV/AIDS and environmental issues.

The process of contracting the PSPs should be reviewed and consideration accorded to lengthening contracts up to at least medium-term duration in tandem with the government's own development planning framework.

5.2.5 Agricultural Education and Training

The National Agricultural Education Policy (NAEP) (2004-2015) developed jointly by the PMA and the Ministry of Education and Sports (MoES), provides the framework for conveying educational messages and best practices to farmers. Literate parents are also more likely to take advantage of Universal Primary Education (UPE) by enrolling their children, thus giving them opportunities to diversify into more lucrative livelihood activities in future. Yet many of the adult population of Uganda, especially amongst the 85 per cent of the poor who live in the rural areas, lack functional skills.

Integrating agricultural education within the curricula for primary school education remains a challenge as both the teachers and pupils have not shown enthusiasm for and commitment to the recommended agricultural practices as a daily routine.

The functional adult literacy programme, which is pivotal to adult farmers' ability to conceptualise and implement best prac-

tices, continues to face challenges due to rising dropout rates.

Recommendations

At the primary school level, more pupil-friendly posters, tapes, videos, and informative materials should be developed and widely circulated in schools. Facilitation mechanisms to informal education approaches, such as visits to model farms, should be applied to stimulate interest in pupils.

Functional adult literacy affirmative action strategies for the people with disabilities, women and other vulnerable groups should be formulated. Since attendance of FAL classes is gender-sensitive, women and men should have separate FAL classes in order for more men and women to be encouraged to join. Women FAL classes should be facilitated by women instructors. Instructors should be provided with more training and incentives by introducing a modest user-fee payable to them.

5.2.6 Agricultural Finance and Investment

A lack of working capital for rural production is an aspect of poverty. Cash is required for seasonal or batch inputs and for equipment and labour-saving machinery, particularly animal traction. For the subsistence and emergent producers, the proposed remedy over the decades has been access to credit.

The micro-finance outreach plan (MOP) was launched in 2003 as a vehicle for extending financial services to the rural poor. Although the rollout of MOP has lagged behind owing to inadequate funding, its objective has largely been achieved since access and availability of rural financial services have improved with the establishment of 12 new rural MFI branches reaching out to 22,000 new clients. This compares well with the intended target in 2003 of 10 new MFI branches and 10,000 new clients.

Despite the MOP's reported success, lending to agriculture, and specifically to small farmers, has been unattractive to most MFIs. The key factors that have negated lending to small farmers include: a) the concentration of demand for borrowing at the start of a growing season, with long gestation periods during which repayments are hard to come by; b) the challenges of mobilizing savings from agriculture; c) the low number of commercial and semi-commercial farmers; d) the high costs of processing, monitoring and enforcing agricultural loans; and e) the tendency by farmers to default on their loans. This underscores the need to have an integrated and interlinked agricultural strategy that jointly addresses agro-finance and small-scale irrigation as priorities for smallholder farmers, among others.

Recommendations

In order to widen financial access and outreach to rural farmers, the following measures are recommended: (i) development of innovative financing packages that are suitable and flexible for small farmers with long gestation periods; (ii) support mechanisms that trigger savings mobilisation at village level; (iii) devise strategies to attract small farmers to engage in the expansion of their farming enterprises to semi-commercial and commercial farming; (iv) and decentralising financing of small farmers to ensure lower costs of processing, monitoring and enforcement of agricultural loans.

Enhancing income-generating capacity is critical for mitigating the impact of HIV/AIDS on rural households. This can make important contributions to household survival by helping to maintain expenditure patterns. Income-generating capacity can be enhanced in various ways, such as

through micro-credit. However, evidence shows that loans obtained by the poor are mostly spent on education and medical expenses, especially those affected by HIV/AIDS. The HIV/AIDS pandemic will continue to increase the number of women-headed households with many dependants. As a result they would require counselling, orientation, literacy, and business development training before they are able to manage financial services in a sustainable manner.

It is also important to assess the impact of HIV/AIDS on micro-finance and find ways to address the issues arising from it. Credit institutions need to link up with mainstream and micro insurers to facilitate death insurance. This would reduce the impact on solidarity groups' savings if one of their members died.

5.2.7 Value Chain Promotion

The Ministry of Tourism, Trade and Industry (MTTI) is responsible for marketing and agro-processing. The Marketing and Agro-Processing Strategy (MAPS), which was approved in 2004, aims at increasing the competitiveness of the sector by addressing major constraints through public investments. One of the major constraints to this strategy is that agricultural marketing in Uganda is characterised by limited access to finance by many small traders, small amounts that most farmers have to sell, and the high cost and the scattered nature of their locations, lack of infrastructure for haulage, and the high cost and availability of transport.

Recommendations

Small rural farmer groups can realise economies of scale and increased bargaining power by operating collectively in input and produce markets. To ensure effective and collective action by rural poor farmers, government should: a) develop the capacity of producer organisations to engage in market transactions; b) provide support to farmers' enterprise selection and farmers' decision making; and c) educate farmers to engage more effectively in the liberalised market environment.

5.2.8 Land Access, Utilisation and Management

Uganda land tenure is an important factor for the commercialisation and modernisation of agriculture both in terms of providing collateral for finance and allowing for large-scale production. The Land Sector Strategic Plan (LSSP) tends to address the need for a land policy to define the range of formally recognised land rights and their distribution within the framework of land use. In this respect a land-use policy is under formulation that should address poverty reduction and agricultural enhancement measures such as revenue generation based on land taxation and privatisation of land services. Productivity of land must be guaranteed and enhanced, and therefore it is necessary to manage land in a sustainable way, i.e. in a manner that is consistent with economic objectives (such as increased output), social objectives (e.g. ensuring equal distribution of income), and environmental objectives (that is, without undermining the ability of the ecosystem to deliver vital services).

Two additional key areas critical to agricultural development are water for production and sustainable forestry management. The water for production (WfP) strategy and investment plan which is under formulation are critical in revamping the increased productivity and the reliability in farmers' produce. The Uganda Forestry Policy was approved in 2001, followed by a National Forestry Plan, which was approved in 2002, followed by a National Forestry and Tree-Planting Bill in 2003. Although the National Forestry Authority has actively been cooperating with PMA in monitoring and evaluation, there is still poor integration with other pillars of the PMA, especially the potential for agro-forestry as

a strategy for poverty reduction that has been overlooked by NAADS.

Natural resources management issues are being addressed through the development of District Environmental Action Plans that are integrated into the District Development Plan. Much as technical staff and farmers do appreciate the severity of the environmental problems caused by inappropriate practices, there are still limited incentives caused by the nature of the land tenure.

Recommendations

The following key areas should be addressed to achieve sustainable natural resources utilisation and management:

a) Land resources management: The land use policy under formulation should address poverty reduction and agricultural enhancement measures such as revenue generation based on land taxation and privatisation of land services.

b) Forestry management: Supporting provision of training and seeds/seedlings for community forestry and woodlot programmes, including community nurseries; collaborating with community members on infrastructure development, such as community access roads that are critical for produce haulage; supporting mechanisms that ensure that excessive use of commons does not impinge on the remaining natural and common resource areas; training community facilitators and farmers in crop and soil management practices that reduce soil erosion and prevent fertilisers and other agro-chemicals from entering water systems; promoting land-use practices that protect natural biodiversity and increase agro-biodiversity; and identifying mechanisms for rewarding farmers through international conventions for sequestering carbon through soil fertility restoration and conservation practices.

c) Water resources management: Exploring and costing optional technologies (e.g. boreholes, dug wells) for increasing water supply at the household level; installing and training the community in rain-water harvesting and collection from rooftops and storage tanks in schools, medical facilities and other appropriate buildings; providing material and training to filter and/or disinfect all collected water depending on the raw water quality; and promoting the creation of ventilated improved pit latrines.

5.2.9 Rural Infrastructure

The failure to link commodity production and the market using appropriate infrastructure has been considered one of the biggest omissions in the current approach to fighting poverty. There are many potentially productive areas of the country that are essentially not part of the productive economy simply because of lack of access infrastructure (roads, rail and telecommunication services).

Because of the infrastructural deficiencies that have constrained smallholder producers from participating in supply chains, there has been a proliferation of exploitative middlemen taking advantage of the inadequacies of small producers in accessing markets. Integrating producers into new supply chains is critical if poverty is to be reduced.

Four infrastructural elements are identified as critical to smallholder production and integration into supply chains: transportation, storage, communication and irrigation. In the effort to support rural development, Government is dividing the country into different ecological zones and, therefore, promoting the production of certain crops in particular ecological zones. This effort, however, may not

succeed without a strong infrastructural investment that will link the producers to the markets.

Recommendation

In order to improve the transport and other rural infrastructure, government should prioritise investments that improve haulage of agricultural produce of poor farmers, particularly in more remote areas to: a) increase community access roads directly through MAAIF rather than through MWHC, to better link farmers with markets; b) support investment in rural electrification to increase agro-processing capacity; c) support expansion of rail and air freight transport for bulk and perishable produce; and d) improve the efficiency of post-harvest technologies, including construction of storage facilities at farm level.

Poor and inadequate transport hinders improving the livelihoods of the farmers and the rural poor, while reliable and affordable transport reduces vulnerability among pregnant women, the elderly, PWD and school-going children, who find even short distances a barrier to accessing social services. Improvement of rural roads (district and community access roads) will not only result in increased access to services by the poor but also specifically address women's transport needs, thus reducing the time spent traveling. Furthermore improved transport would facilitate food distribution from food-surplus to food-scarce areas. IDP camps, school feeding programme would equally benefit. Transport would facilitate the dissemination of information on family planning and would enhance women's mobility to access family planning services, while appropriate technologies reduce the household and agricultural work burden, which forces many households to have many children. Emphasis should be placed on the use of labour-based methods to increase employment, encourage women's participation and promote local contractors.

5.2.10 Cross-cutting Issues

a) Gender

Women are more active in agriculture than men, specifically in food-crop production, marketing, and processing of agricultural products, but the incidence of poverty is highest among women as compared to men. Owing to time, poverty among women, the availability of women's labour is a major constraint to commercialised smallholder production. Bringing water, health, educational, market, credit and energy services nearer to households would address women's practical need and more strategic issues, the increasing their productivity and incomes while allowing them more leisure time and participation in the other social and political activities. Appropriate technologies for ploughing, transportation and processing are important for easing women's arduous and time-consuming tasks and enhancing their participation in formal employment and off-farm economic activities. This reduces post-harvest losses and offers alternative transport means to back-and head-loading, which have negative health implications and leads to school absenteeism.

Lack of control over productive resources by women remains one of the root causes of gender poverty as women lack control over land, the crops their labuor produces from it, livestock, and other productive resources. Besides women being discouraged from participating in commercial agriculture, their lack of decision-making power over productive resources is a direct cause of poor nutrition and health, excessive fertility, high infant mortality, and overwork. High fertility, discrimination in formal labour markets, gender inequalities in education, and the difficulties encountered in combining employment with

childcare inhibit women from participating in formal sector employment.

In particular, gender inequality in control over and ownership of land not only puts significant categories of women and their dependents at risk of impoverishment; it also contributes to constraints to improving the well-being of households. Poverty also reinforces gender inequalities when productive land is not optimally used and when land scarcity and fragmentation become sources of conflict within households, families and communities.

Recommendation

Measures that ensure equitable distribution of land and gender equality in land access, control and ownership should be addressed as a matter of urgency for agricultural modernisation and rural development to be achieved. Increased commitment at the political, policy, and technical levels for improving women's and youth's ability to access and own land, including action on the co-ownership clause should be supported.

Mechanisms that bring water points closer to the households, thereby reducing the time, energy and risks involved for women and girls, who collect water through poor, insecure footpaths, labour and energy intensive methods should be supported.

b) HIV/AIDS

HIV/AIDS devastates the productive labour force leading to low production, food insecurity, low income and low savings, hence deepening poverty. Specific strategies are necessary to enable infected and affected individuals and communities to remain productive, self-reliant, continue to feed themselves and generate income. At the same time, extension agencies and their staff are being affected by AIDS-related attrition.

Because of the cyclical relationship between HIV/AIDS and nutrition, the promotion of crops, plants, vegetables and trees of nutritional and medicinal value, including those which can reduce infection and treat infectious diseases and malnutrition is important.

Recommendation

Support should be extended to the revision of the existing extension training curriculum to better reflect HIV/AIDS impacts and possible responses related to agricultural production and food security. Emphasis should also be placed on the utilisation of indigenous crops, home gardening and school gardening, labour-saving technologies and paralegal training to increase awareness of co-ownership in order to address the issue of property grabbing.

Service providers should work with other sub-sectors to promote and enhance legal awareness on the inter-relationship that exists between HIV/AIDS death, land and property wrangles, disowning widows and their orphans and stigmatisation of the infected persons and the affected families.

Negative practices, especially widow inheritance, polygamy and forced marriage, need to be mitigated and reformed through massive sensitisation and education using traditional institutions where they exist.

Greater support should be extended to mitigation measures that address the impact of conflict on women and children, especially in the North and those that promote behavioural change amongst sexually active rural people.

Urgent attention should be directed at widened access to and distribution of ARVs, besides VCT services, throughout the country, including innovative communication strategies that target married

couples who have become increasingly vulnerable.

c) Population Growth

The high rate of population growth will severely undermine efforts to boost and maintain economic growth rates and agricultural productivity. A high population growth rate is a contributing factor to poverty, especially its association with complex socio-cultural factors and excessive fertility, which are linked to the powerlessness of women.

Recommendation

Population control measures should not be isolated from economic growth and every sector should have a plan on the ways and means of contributing to reducing the population growth rate.

The welfare of farmers, who constitute the bulk of the poor people, needs to be improved so that they are healthy and functionally literate to increase productivity. Furthermore, the smallholder-farmers need not only family planning services but also appropriate labour-saving technologies to mitigate labour constraints which have been a push factor for rural households to have large families.

Nationwide interventions to extend family planning services are imperative in addition to women's participation in income-generating activities as well as sensitisation of both women and men with a view to dispelling the myths surrounding family planning and polygamy.

d) Environment and Natural Resources

Sound management of the environment and natural resources is a key component necessary to sustenance of agricultural production and should be emphasised in the rural development strategy through offering incentives to entities that engage in the management and conservation practices.

ANNEXES

ANNEXES

Annex 1: Technical Notes on Measurements

The Human Development Index (HDI)

The HDI is a summary measure of human development. It measures the average achievements in a country in three basic dimensions of human development:

- A long and healthy life, as measured by life expectancy at birth.
- Knowledge, as measured by the adult literacy rate (with two-thirds weight) and the combined primary, secondary and tertiary gross enrolment ratio (with one-third weight).
- A descent standard of living, as measured by GDP per capita (PPP US$).

Before the HDI itself is calculated, an index needs to be created for each of these dimensions. To calculate these dimension indices – life expectancy, education, and GDP indices – minimum and maximum values (goal posts) are chosen for each underlying indicator.

Performance in each dimension is expressed as a value between 0 and 1 by applying the following general formula:

$$\text{Dimension index} = \frac{\text{Actual value} - \text{Minimum value}}{\text{Maximum value} - \text{Minimum value}}$$

The HDI is then calculated as a simple average of the dimension indices. The box below illustrates the calculation of the HDI for a sample country and the implementation of the formula is shown in table A1.1

Calculating the HDI

The following illustration of the calculation of the HDI uses data for Uganda as computed in this report.

a) Calculating the life expectancy index

The life expectancy index measures the relative achievement of a country in the life expectancy at birth as shown.

$$\text{Index} = \frac{\text{Actual value} - \text{Minimum value}}{\text{Maximum value} - \text{Minimum value}}$$

b) Calculating the education index

The education index measures a country's relative achievement in both adult literacy and combined primary, secondary and tertiary gross enrolment. First an index for adult literacy and one for combined gross enrolment are calculated. Then these two indices are combined to create the education index, with two-thirds weight to combined gross enrolment.

c) Calculating the GDP index

The GDP index is calculated using adjusted GDP per capita (PPP US$). In the HDI, income serves as a surrogate for all the dimensions of human development not reflected in a long and healthy life and in knowledge. Income is adjusted because achieving a respectable level of human development does not require unlimited income. Accordingly, the logarithm of income is used.

d) Calculating the HDI

Once dimension indices have been calculated, determining the HDI is straight forward. It is a simple average of the three dimension indices.

Table A1.1 Computation of HDI using data shown in Table 3.1

Life expectancy index (LEI)

$$LEI = \frac{(Actaul\_life\_expectancy) - (Min\_life\_expectancy)}{(Maximum\_life\_expectancy) - (Min\_life\_expectancy)} \quad \ldots\ldots 1a$$

$$LEI = \frac{49 - 25}{85 - 25} \quad \ldots\ldots 1b$$

= 0.42

Adult literacy index (ALI)

$$ALI = \frac{(Actaul\_adult\_Literacy\_level) - (Min\_adult - literacy\_level)}{(Maximum\_adult\_literacy\_level) - (Min\_adult\_literacy\_level)} \quad \ldots\ldots 2a$$

$$ALI = \frac{69\% - 0\%}{100\% - 0\%} \quad \ldots\ldots 2b$$

=0.69

Gross Enrolment Index (GEI)

$$GEI = \frac{(Gross\_enrolment\_level) - (Min\_gross\_enrolment\_level)}{(Maximum\_gross\_enrolment\_level) - (Min\_gross\_enrolment\_level)} \quad \ldots\ldots 2a$$

$$GEI = \frac{80.9\% - 0\%}{100\% - 0\%} \quad \ldots\ldots 2b$$

= 1.18

Combined education index

$$CEI = \frac{2}{3} ALI + \frac{1}{3} GEI \quad \ldots\ldots 3a$$

$$CEI = \frac{2}{3} X 0.69 + \frac{1}{3} X 0.81 \quad \ldots\ldots 3b$$

= 0.85

GDP per capita index

$$GDPI = \frac{Log(Actual\_value) - Log(Min\_value)}{Log(Max\_value) - Log(Min\_value)} \quad \ldots\ldots 4a$$

$$GDPI = \frac{Log(2{,}777{,}208 Ugshs) - Log(170{,}800 Ugshs)}{Log(68{,}080{,}000 gshs) - Log(170{,}800 Ugshs)} \quad \ldots\ldots 4b$$

= 0.466

Human Development Index

$$HDI = \frac{1}{3} GDPI + \frac{1}{3} CEI + \frac{1}{3} LEI \quad \ldots\ldots 5a$$

$$HDI = \frac{1}{3} 0.465 + \frac{1}{3} 0.73 + \frac{1}{3} 0.40 \quad \ldots\ldots 5b$$

= 0.581

$$LEI = \frac{(Actaul\_life\_expectancy) - (Min\_life\_expectancy)}{(Maximum\_life\_expectancy) - (Min\_life\_expectancy)} \quad \ldots\ldots 1a$$

The Human Poverty Index for developing countries (HPI-1)

While the HPI-1 measures deprivations in three basic dimensions of human development captured in the HDI:

- A long and healthy life – vulnerability to death at a relatively early age, as measured by the probability at birth of not surviving to age 40.
- Knowledge – exclusion from the world of reading and communications, as measured by the adult literacy rate.
- A decent standard of living – lacking of access to overall economic provisioning, as measured by the un-weighted average of two indicators, the percentage of the population without sustainable to an improved water source and the percentage of children underweight for age.

Calculating the HPI-1 is more straightforward than calculating the HDI. The indicators used to measure the deprivations are already normalised between 0 and 100 (because they are expressed as percentages), so there is no need to create dimension indices as for the HDI.

Originally, the measure of deprivation in a decent standard of living also included an indicator of access to health services. But because reliable data on access to health services is lacking for recent years, in this year's report, deprivation in a decent standard of living is measured by two rather than three indicators – the percentage of the population without sustainable access to an improved water source and the percentage of children underweight for age.

The Human Poverty Index (HPI)

The human poverty index for selected OECD countries (HPI-2)

The HPI-2 measures deprivations in the same dimensions as the HPI-1 and also captures social exclusion. Thus it reflects deprivations in four dimensions.

- A long and healthy life – vulnerability to death at a relatively early age, as measured by the probability at birth of not surviving to age 60.
- Knowledge – exclusion from the world of reading and communications, as measured by the percentage of adults (aged 16-65) lacking functional literacy skills.
- A descent standard of living – as measured by the percentage of people living below the income poverty line (50 per

cent of the median adjusted household disposable income).
- Social exclusion – as measured by the rate of long-term unemployment (12 months or more).

Calculating the HPI-1

a) Measuring the deprivation in a decent standard of living

An un-weighted average of two indicators is used to measure deprivation in a decent standard of living.

Un-weighted average = ½ (population without sustainable access to an improved water source) + ½ (the number of children underweight for age)

A sample calculation: Central African Republic

Population without sustainable access to an improved water source = 30%
Children underweight for age= 23%
Un-weighted average= ½(30) + ½(23) = 26.5%

b) Calculating the HPI-1

The formula for calculating the HPI-1 is as follows:

$$\text{HPI-1} = [1/3(P1\ \ P_1^{\alpha} + P_2^{\alpha} + P_3^{\alpha})]^{1/2}$$

Where:
P1=Probability at birth of not surviving to age 40 (times 100)
P2=Adult illiteracy rate
P3=Un-weighted average of population without sustainable access to an improved water source and children under weight for age=3

A sample calculation: Central African Republic

P1= 55.3%
P2= 51.8%
P3= 26.5%
HPI-1 = [1/3(55.33+51.83+26.53)]1/3 = 47.8

The Gender Empowerment Measure (GEM)

Focusing on women's opportunities rather than their capabilities, the GEM captures gender inequality in three key areas:
- Political participation and decision-making power, as measured by women's and men's percentage shares of positions as legislators, senior officials and managers and women's and men's percentage share of professional and technical positions.
- Power over economic resources, as measured by women's and men's estimated earned income (PPP US$).

For each of these dimensions, an equally distributed equivalent percentage (EDEP) is calculated, as a population-weighted average, according to the following general formula:

EDEP= { [female population share (female index1-e)] + [male population share (male index1-e)]} 1/1-e

□ measures the version to inequality. In GEM (as in the GDI), □ = 2, which places a moderate penalty on inequality. The formula is thus:

EDEP= {[female population share (female index-1)] + [male population share (male index-1)]}-1

For political and economic participation and decision-making, the EDEP is then indexed by dividing it by 50. The rationale for this indexation: in an ideal society, with equal empowerment of the sexes, the GEM variables would equal 50%: that is, women's share would equal men's share for each variable.

Annex II: Statistical Tables

Table 3.1A Exports by value ('000 US $), 2001 - 2005

Commodity	Year 2001	Year 2002	Year 2003	Year 2004	Year 2005
Traditional Export Crops					
Coffee	97,652	96,626	100,233	124,237	172,942
Cotton	13,434	9,519	17,755	42,758	28,821
Tea	30,031	31,293	38,314	37,258	34,274
Tobacco	32,096	45,262	43,042	40,702	31,486
Non-Traditional Exports					
Maize	18,339	10,609	13,724	17,896	21,261
Beans and other Legumes	2,354	3,284	5,235	8,968	8,693
Fish and Fish products	78,150	87,945	88,113	103,309	142,691
Cattle hides	25,532	9,810	4,925	5,409	7,064
Sesame seeds	796	510	2,183	2,788	4,779
Soya beans	91	74	87	118	126
Soap	2,700	3,434	5,553	7,708	7,194
Electric Current	10,554	15,645	13,778	12,075	4,465
Cocoa beans	1,921	2,023	7,001	6,801	9,638
Cobalt	12,656	7,032	0	11,548	14,320
Hoes and hand tools	359	385	580	348	1,159
Pepper	397	111	176	368	594
Vanilla	2,417	6,898	13,546	6,120	6,135
Live animals	199	80	61	130	29
Fruits	68	670	436	917	1,158
Groundnuts	26	75	7	1	23
Bananas	672	225	110	850	806
Roses and Cut flowers	14,750	17,828	22,080	26,424	24,128
Ginger	26	462	15		78
Gold and gold compounds	49,293	60,342	38,446	61,233	73,072
Other Precious Compounds	48	0	13,612	4,713	6
Other products	44,952	46,714	77,193	114,507	183,935
Petroleum products	12,252	10,749	27,901	27,904	32,015
Traditional export	173,213	182,700	199,344	244,955	267,522
Non-traditional exports	278,552	284,905	334,762	420,134	545,335
Total	451,765	467,605	534,106	665,090	812,857

Table 3.2 A Computation of HDI

District	Life expect-ancy	Min =25, Max =85 Life exp index	Adult literacy index (%)	Min 0, Max 100 Adult literacy index	Gross enrolment rate	Min 0 Max 100 GER Index	Combined education index	GDP Index	HDI
MOROTO	32.87	0.13	13.1	0.13	44.0	0.44	0.23	0.282	0.216
KOTIDO	51.64	0.44	8.4	0.08	26.8	0.27	0.15	0.286	0.292
ABIM	51.64	0.44	8.4	0.08	26.8	0.27	0.15	0.286	0.292
KAABONG	51.64	0.44	8.4	0.08	26.8	0.27	0.15	0.286	0.292
NAKAPIRIPIRIT	51.02	0.43	21.6	0.22	45.5	0.46	0.30	0.382	0.370
GULU	30.86	0.10	54.0	0.54	145.4	1.45	0.84	0.349	0.430
AMURU	30.86	0.10	54.0	0.54	145.4	1.45	0.84	0.349	0.430
KITGUM	29.13	0.07	57.1	0.57	142.5	1.43	0.86	0.392	0.439
YUMBE	46.47	0.36	52.0	0.52	105.2	1.05	0.70	0.320	0.458
BUNDIBUGYO	36.02	0.18	55.3	0.55	107.6	1.08	0.73	0.466	0.459
PADER	36.58	0.19	52.9	0.53	159.4	1.59	0.88	0.329	0.469
ADJUMANI	47.92	0.38	61.7	0.62	77.2	0.77	0.67	0.387	0.479
KAMWENGE	41.63	0.28	56.8	0.57	109.3	1.09	0.74	0.423	0.481
KATAKWI	45.78	0.35	52.2	0.52	117.6	1.18	0.74	0.374	0.487
AMURIA	45.78	0.35	52.2	0.52	117.6	1.18	0.74	0.374	0.487
KISORO	49.93	0.42	51.4	0.51	105.9	1.06	0.70	0.374	0.495
NEBBI	40.26	0.25	61.7	0.62	133.4	1.33	0.86	0.404	0.505
KABERAMAIDO	54.83	0.50	37.5	0.38	129.6	1.30	0.68	0.338	0.506
MOYO	52.74	0.46	69.5	0.70	77.8	0.78	0.72	0.334	0.506
APAC	41.04	0.27	63.6	0.64	134.2	1.34	0.87	0.385	0.508
OYAM	41.04	0.27	63.6	0.64	134.2	1.34	0.87	0.385	0.508
KYENJOJO	40.77	0.26	67.5	0.68	102.9	1.03	0.79	0.504	0.520
KALANGALA	44.40	0.32	58.4	0.58	95.2	0.95	0.71	0.532	0.521
MPIGI	38.02	0.22	68.3	0.68	133.8	1.34	0.90	0.448	0.522
KIBAALE	41.52	0.28	65.6	0.66	120.8	1.21	0.84	0.456	0.524
MASINDI	44.98	0.33	59.4	0.59	107.9	1.08	0.76	0.484	0.524
BULISA	44.98	0.33	59.4	0.59	107.9	1.08	0.76	0.484	0.524
LIRA	41.01	0.27	65.5	0.65	144.3	1.44	0.92	0.389	0.524
DOKOLO	41.01	0.27	65.5	0.65	144.3	1.44	0.92	0.389	0.524
AMOLATAR	41.01	0.27	65.5	0.65	144.3	1.44	0.92	0.389	0.524
HOIMA	45.26	0.34	63.4	0.63	114.9	1.15	0.81	0.474	0.539
KASESE	49.44	0.41	63.4	0.63	107.4	1.07	0.78	0.447	0.545
MUBENDE	46.83	0.36	72.2	0.72	99.8	1.00	0.81	0.465	0.548
MITYANA	46.83	0.36	72.2	0.72	99.8	1.00	0.81	0.465	0.548
KAMULI	50.11	0.42	63.2	0.63	116.6	1.17	0.81	0.417	0.548
KALIRO	50.11	0.42	63.2	0.63	116.6	1.17	0.81	0.417	0.548
KABAROLE	41.03	0.27	74.0	0.74	111.9	1.12	0.87	0.512	0.548
ARUA	45.40	0.34	62.1	0.62	157.0	1.57	0.94	0.377	0.551
NYADRI	45.40	0.34	62.1	0.62	157.0	1.57	0.94	0.377	0.551
KOBOKO	45.40	0.34	62.1	0.62	157.0	1.57	0.94	0.377	0.551
MBARARA	46.44	0.36	64.2	0.64	111.8	1.12	0.80	0.500	0.553
ISINGIRO	46.44	0.36	64.2	0.64	111.8	1.12	0.80	0.500	0.553
IBANDA	46.44	0.36	64.2	0.64	111.8	1.12	0.80	0.500	0.553
KIRUHURA	46.44	0.36	64.2	0.64	111.8	1.12	0.80	0.500	0.553

District	Life expect-ancy	Min =25, Max =85 Life exp index	Adult literacy index (%)	Min 0, Max 100 Adult literacy index	Gross enrolment rate	Min 0 Max 100 GER Index	Combined education index	GDP Index	HDI
KAYUNGA	41.30	0.27	74.2	0.74	140.4	1.40	0.96	0.426	0.553
PALLISA	57.02	0.53	49.0	0.49	126.4	1.26	0.75	0.385	0.556
BUDAKA	57.02	0.53	49.0	0.49	126.4	1.26	0.75	0.385	0.556
RAKAI	44.97	0.33	72.6	0.73	113.8	1.14	0.86	0.471	0.556
BUSIA	45.54	0.34	62.7	0.63	137.9	1.38	0.88	0.449	0.556
BUGIRI	48.90	0.40	64.7	0.65	123.9	1.24	0.84	0.427	0.557
BUSHENYI	48.78	0.40	67.0	0.67	112.3	1.12	0.82	0.456	0.558
MAYUGE	52.49	0.46	61.7	0.62	122.0	1.22	0.82	0.398	0.558
MASAKA	40.64	0.26	83.3	0.83	112.9	1.13	0.93	0.492	0.561
IGANGA	49.42	0.41	65.1	0.65	120.0	1.20	0.83	0.458	0.567
NAMUTUMBA	49.42	0.41	65.1	0.65	120.0	1.20	0.83	0.458	0.567
KABALE	45.44	0.34	63.9	0.64	130.1	1.30	0.86	0.500	0.567
TORORO	54.07	0.48	54.0	0.54	125.9	1.26	0.78	0.437	0.567
BUTALEJA	54.07	0.48	54.0	0.54	125.9	1.26	0.78	0.437	0.567
KIBOGA	44.08	0.32	75.1	0.75	137.0	1.37	0.96	0.443	0.573
KANUNGU	46.07	0.35	71.6	0.72	120.6	1.21	0.88	0.512	0.581
KUMI	56.02	0.52	58.4	0.58	125.7	1.26	0.81	0.418	0.581
NTUNGAMO	53.63	0.48	59.6	0.60	115.3	1.15	0.78	0.492	0.584
SSEMBABULE	45.53	0.34	70.4	0.70	160.0	1.60	1.00	0.415	0.587
MBALE	52.85	0.46	60.0	0.60	135.9	1.36	0.85	0.456	0.591
SIRONKO	56.08	0.52	61.5	0.61	127.8	1.28	0.84	0.420	0.591
SOROTI	53.57	0.48	61.4	0.61	134.0	1.34	0.86	0.443	0.592
NAKASONGOLA	43.03	0.30	77.1	0.77	148.8	1.49	1.01	0.471	0.594
JINJA	50.97	0.43	69.3	0.69	108.5	1.08	0.82	0.528	0.595
MUKONO	48.90	0.40	78.8	0.79	109.7	1.10	0.89	0.504	0.598
KAPCHORWA	60.21	0.59	54.0	0.54	131.3	1.31	0.80	0.417	0.600
BUKWO	60.21	0.59	54.0	0.54	131.3	1.31	0.80	0.417	0.600
RUKUNGIRI	50.73	0.43	75.4	0.75	120.9	1.21	0.91	0.474	0.603
LUWERO	44.15	0.32	82.1	0.82	147.8	1.48	1.04	0.471	0.610
NAKASEKE	44.15	0.32	82.1	0.82	147.8	1.48	1.04	0.471	0.610
KAMPALA	50.79	0.43	88.9	0.89	81.5	0.82	0.86	0.637	0.644
WAKISO	50.37	0.42	86.7	0.87	115.6	1.16	0.96	0.594	0.660
Central	52.69	0.46	80	0.80	117.5	1.18	0.93	0.525	0.637
East	52.69	0.46	64	0.64	125.0	1.25	0.84	0.443	0.582
North	45.87	0.35	59	0.59	114.4	1.14	0.77	0.373	0.499
West	48.13	0.39	67	0.67	113.2	1.13	0.82	0.478	0.563
Urban	53.83	0.48	86.0	0.86	113.0	1.13	0.95	0.559	0.663
Rural	48.13	0.39	66.0	0.66	118.0	1.18	0.83	0.429	0.549
Uganda	50.40	0.42	69	0.69	118.0	1.18	0.85	0.466	0.581

Table 3.3A Computation of HPI

	unsafe water source	Under weight	problem of dying before 40 yrs	Adult literacy	Dep.of a decent standard of living	HPI
Kampala	7.7	12.0	9.9	8.8	9.9	9.6
Wakiso	33.5	6.0	9.9	11.1	19.7	14.9
Mukono	33.2	11.1	8.3	18.8	22.1	18.2
Luwero	31.0	17.5	11.8	16.1	24.3	18.9
Jinja	0.0	27.6	6.9	27.9	13.8	20.2
Kayunga	22.5	20.0	10.1	24.2	21.3	20.2
Moyo	10.9	20.0	4.3	30.5	15.4	22.0
Mpigi	27.5	14.6	12.7	29.6	21.1	23.2
Lira	21.0	7.8	6.6	32.5	14.4	23.2
Kanungu	36.8	23.1	5.4	24.2	29.9	23.9
Kabarole	43.8	19.2	11.0	20.4	31.5	23.9
Kabala	18.4	12.1	4.3	33.6	15.3	24.0
Kamuli	7.6	25.2	7.8	33.4	16.4	24.1
Iganga	17.4	32.8	7.6	31.6	25.1	25.2
Kibaale	35.3	14.3	6.4	32.1	24.8	25.3
Adjumani	0.0	37.5	4.9	35.2	18.8	25.6
Rukungiri	51.1	17.6	5.6	22.5	34.4	25.9
Masaka	49.7	22.6	12.9	14.3	36.1	25.9
Soroti	11.6	17.1	5.8	37.3	14.3	26.4
Nebbi	23.3	16.1	5.3	36.5	19.7	26.6
Kiboga	49.5	20.0	9.9	24.0	34.7	26.6
Kyenjojo	48.1	14.6	8.1	30.5	31.4	27.1
Kumi	7.8	11.8	5.9	39.0	9.8	27.2
Mubende	57.4	13.6	9.0	25.7	35.5	27.5
Mbale	22.4	23.4	6.0	38.2	22.9	28.3
Masindi	30.8	22.0	7.4	38.6	26.4	29.4
Arua	35.8	23.7	4.0	36.9	29.7	29.4
Bushenyi	43.0	29.5	5.5	30.9	36.3	29.5
Apac	42.7	24.3	6.4	34.9	33.5	29.9
Kitgum	6.7	30.0	12.2	42.9	18.3	30.7
Mayuge	41.0	25.0	6.1	37.0	33.0	30.7
Kasese	49.5	26.1	4.5	33.0	37.8	31.1
Hoima	44.5	27.5	7.5	35.1	36.0	31.1
Busia	35.2	36.8	7.2	35.3	36.0	31.2
Tororo	20.7	19.0	5.4	44.8	19.9	32.0
Gulu	11.7	22.8	10.8	45.4	17.2	32.2
Bugiri	56.5	22.2	6.2	34.2	39.4	32.3
Budibugyo	42.2	12.5	8.3	43.6	27.3	32.6
Pader	2.9	23.5	7.2	47.1	13.2	32.9
Kapchorwa	36.2	13.3	3.9	45.3	24.8	33.0
Katakwi	21.4	5.3	7.6	47.4	13.3	33.2
Kamwenge	44.2	25.7	5.6	42.5	34.9	34.2
Pallisa	20.0	12.8	4.3	49.1	16.4	34.5
Sironko	59.5	23.5	5.9	38.1	41.5	34.9
Mbarara	66.4	25.0	5.3	32.8	45.7	35.2

	unsafe water source	Under weight	problem of dying before 40 yrs	Adult literacy	Dep.of a decent standard of living	HPI
Sembabule	73.4	20.8	8.4	29.6	47.1	35.2
Ntungamo	63.9	22.0	4.5	38.3	42.9	35.6
nakasongola	67.8	37.5	11.4	21.6	52.6	37.4
Rakai	86.1	22.5	8.9	25.7	54.3	39.0
Kisoro	45.0	42.9	3.2	47.9	43.9	40.2
kaberamaido	11.1	0.0	5.6	60.0	5.6	41.6
Kalangala	100.0	22.2	4.9	40.1	61.1	46.1
Yumbe	60.5	54.5	3.3	48.0	57.5	46.5
Nakapiripirit	25.2	50.0	3.0	78.0	37.6	56.0
Moroto	14.7	34.9	5.4	86.9	24.8	60.7
Kotido	38.0	44.1	2.2	91.5	41.0	65.3

Table 3:4A Gender Empowerment Measure (GEM) by District, 2005

District	EDEP Parliamentary representation	EDEP for economic participation	EDEP for Income	GEM
Kayunga	1.000	0.953	0.003	0.652
Butaleja	1.000	0.941	0.004	0.648
Koboko	1.000	0.939	0.002	0.647
Nakasongola	1.000	0.900	0.003	0.635
Katakwi	1.000	0.882	0.001	0.628
Amolatar	1.000	0.856	0.001	0.619
Yumbe	1.000	0.842	-0.007	0.612
Kaabong	1.000	0.832	0.000	0.611
Kotido	1.000	0.829	0.000	0.610
Namutumba	1.000	0.801	0.002	0.601
Budaka	1.000	0.798	0.002	0.600
Kalangala	0.952	0.840	0.008	0.600
Bukwo	1.000	0.788	0.003	0.597
Dokolo	1.000	0.757	0.002	0.586
Abim	1.000	0.742	0.001	0.581
Buliisa	1.000	0.738	0.005	0.581
Kibaale	1.000	0.729	0.004	0.578
Bukedea	1.000	0.724	0.004	0.576
Kumi	0.877	0.806	0.003	0.562
Moyo	0.895	0.779	0.001	0.558
Rukungiri	0.903	0.763	0.005	0.557
Soroti	0.955	0.712	0.003	0.557
Kaliro	1.000	0.662	0.004	0.556
Adjumani	1.000	0.651	0.000	0.551
Lyantonde	1.000	0.639	0.005	0.548
Bududa	1.000	0.638	0.004	0.547
Kampala	0.876	0.750	0.016	0.547
Kanungu	0.878	0.752	0.007	0.546
Kiruhura	0.894	0.734	0.006	0.545
Masindi	1.000	0.629	0.005	0.545
Kiboga	0.895	0.733	0.003	0.544
Ntungamo	1.000	0.620	0.006	0.542
Kisoro	1.000	0.615	0.002	0.539
Hoima	0.889	0.723	0.003	0.538
Ibanda	0.884	0.705	0.006	0.531
Ssembabule	0.892	0.689	0.003	0.528
Amuru	0.884	0.684	0.001	0.523
Amuria	0.881	0.681	0.003	0.522
Oyam	0.883	0.669	0.001	0.518
Kaberamaido	0.882	0.635	0.001	0.506
Busia	0.877	0.630	0.004	0.503
Kapchorwa	0.885	0.618	0.003	0.502
Manafwa	0.883	0.611	0.004	0.500
Kitgum	0.885	0.594	0.002	0.494
Pader	0.885	0.583	0.001	0.490

District	EDEP Parliamentary representation	EDEP for economic participation	EDEP for Income	GEM
Mityana	0.750	0.707	0.004	0.487
Nakapiripirit	0.749	0.710	0.000	0.486
Kamwenge	0.878	0.559	0.003	0.480
Mubende	0.750	0.680	0.004	0.478
Kabarole	0.750	0.672	0.007	0.476
Nebbi	0.734	0.691	0.002	0.476
Mbale	0.743	0.666	0.004	0.471
Mayuge	0.739	0.662	0.003	0.468
Bundibugyo	0.737	0.659	0.004	0.467
Luwero	0.746	0.626	0.005	0.459
Tororo	0.630	0.737	0.004	0.457
Rakai	0.742	0.619	0.004	0.455
Arua	0.804	0.557	0.002	0.454
Isingiro	0.743	0.614	0.006	0.454
Apac	0.742	0.612	0.002	0.452
Moroto	0.737	0.618	0.000	0.452
Mpigi	0.639	0.707	0.003	0.450
Mbarara	0.743	0.567	0.006	0.439
Mukono	0.749	0.546	0.006	0.434
Gulu	0.744	0.535	0.001	0.427
Pallisa	0.737	0.529	0.002	0.423
Wakiso	0.739	0.519	0.013	0.423
Sironko	0.746	0.514	0.003	0.421
Bugiri	0.738	0.518	0.004	0.420
Kyenjojo	0.746	0.474	0.005	0.408
Jinja	0.633	0.494	0.008	0.378
Kamuli	0.629	0.476	0.003	0.369
Kasese	0.627	0.475	0.003	0.368
Lira	0.548	0.548	0.002	0.366
Iganga	0.624	0.459	0.005	0.363
Kabale	0.468	0.513	0.005	0.329
Bushenyi	0.425	0.496	0.004	0.308
Masaka	0.353	0.454	0.005	0.271
Nakaseke	0.002	0.226	0.005	0.078
Uganda	0.844	0.674	0.004	0.507

Annex III: The Report Writing Process

Objective and Scope of the Report: The Human Development Reports (HDRs) for Uganda, which have been issued every two years since 1996, present an objective assessment of the progress towards human development made by the country as measured by a set of appropriate indices, namely Human Development Index (HDI), Human Poverty Index (HPI), and the Gender Empowerment Measure (GEM). These assessments are based on selected themes which are chosen by government and the UNDP to reflect the current areas of development concerns. The theme for the Uganda Human Development Report (UHDR) 2007 is: ***Rediscovering Agriculture for Human Development***. Using the most recent techniques for measuring human development and poverty, the UHDR 2007 critically analyses how agricultural performance and rural development have in recent years impacted on human development in Uganda. In particular, the report:

(a) examines agricultural productivity, and rural development in relation to and human development; and it demonstrates the relationship between sound and equitable agricultural performance, rural development, and effective and sustained poverty reduction;
(b) provides an empirical analysis of agricultural and rural development policies and institutions;
(c) analyses the human dimension of agricultural rural development;
(d) assesses policy implications and proposes an agenda of action to tackle agricultural challenges and rural development at the national, regional, and district levels; and
(e) proposes the way forward and recommendations at policy and strategy levels, for future agricultural sector development in Uganda.

Approach and Methodology: The preparation of the UHDR (2007) was led by a team of five national consultants. The report writing process entailed a desk review of documents and analysis of information and data collected and extracted from the publications of the United Nations Agencies; GoU, notably Uganda Bureau of Statistics (UBOS); Donor Agencies; the Private Sector; and Civil Society Organisations such as the Non-Governmental Organisation (NGOs) and Community-Based Organisations (CBOs). A few field visits were carried out on a selective basis. The purpose of these visits were to obtain the views and assessments directly from the rural people at the district and community levels, and to assess whether the perspectives and perception held by the GoU were shared by the masses in the rural areas.

Analysis and Interpretation of Data: Both qualitative and quantitative information and data were collected and analysed. This included information obtained from interviews and field visits which were appropriately cross-referenced and analysed. The processed data was used to generate the needed graphs, statistical tables, pictorials, etc. The synthesised data constituted the basis for the analytical presentation in the report.

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Acronyms and Abbreviations

API	Agricultural Productivity Index
ARV	Anti-Retroviral
ASL	Above Sea Level
BDS	Business Development Services
CBO	Community Based Organisation
ATICS	District Agricultural Training and Information Centres
DRC	Democratic Republic of Congo
EIA	Environment Impact Assessment
ENR	Environment and Natural Resources
ESIP	Education Sector Investment Plan
FAL	Functional Adult Literacy
FAO	Food and Agricultural Organisation of the United Nations
GATT	General Agreement on Tariffs and Trade
GDI	Gender Development Index
GEM	Gender Empowerment Measure
GOU	Government of Uganda
HDI	Human Development Index
HDR	Human Development Report
HIV	Human Immunodeficiency Virus
HPI	Human Poverty Index
HSSP	Health Sector Strategic Plan
LLITN	Long-Term Insecticide Treated Nets
LRA	Lords Resistance Army
LSSP	Land Sector Strategic Plan
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MAPS	Marketing Agricultural Produce Strategy
MDG	Millennium Development Goals
MFPED	Ministry of Finance, Planning and Economic Development
MGLSD	Ministry of Gender, Labour and Social Development
MoLHUD	Ministry of Lands, Housing and Urban Devlopment
MoWT	Ministry of Works and Transport
MWLE	Ministry of Water and Environment
NGO	Non Government Organisation
NHC	National Housing Census
NPA	National Planning Authority
NRM	National Resistance Movement
OECD	Organisation for Economic Cooperation and Development
PEAP	Poverty Eradication Action Plan
PMA	Plan for Modernisation of Agriculture
PSP	Private Service Providers
R&D	Research and Development
RDI	Rural Development Index
SACCO	Savings and Credit Cooperative Society
SIA	Social Impact Assessment
SRDS	Sub-County Rural Development Strategy

SSA	Sub-Sahara Africa
UBOS	Uganda Bureau of Statistics
UDHS	Uganda Demographic and Health Survey
UN	United Nations
UNDP	United Nations Development Programme
UNFPA	United Nations Fund for Population Activities
UPE	Universal Primary Education
UPPAP	Uganda Participatory Poverty Assessment Process
UPPET	Uganda Post-Primary Education and Training

Uganda Human Development Report 2007

The agricultural sector is fundamental to Uganda's development. This human development report argues that with over 70 per cent of the country's population engaged in the sector, coupled with 42 per cent of the rural population living below the poverty line, the promotion of agriculture and rural development would directly benefit the poor and reduce mass poverty. The report examines some of the salient features of the sector and concludes that one of the root causes of rural poverty is women's lack of control over productive resources, including land.

While Uganda's policymakers are increasingly putting emphasis on the transformation of the economy, it is becoming clear that this mainstay of Uganda's economy ought to be strengthened in order to attain the desired transformation. People have to have food security and the various agricultural institutions strengthened to provide adequate services to the rural population. The sector must be backed and supported by a more comprehensive national agricultural policy.

On the relationship between agriculture and human development, the report shows that Uganda has made progress in human development. The human development index (HDI) for 2005/6 confirms the earlier assertion in the Global Human Development Report published by UNDP New York that Uganda has moved into the group of medium human development countries.

The significance of the progress to date is undoubtedly seen in the improvement of economic growth and life expectancy from 47 to 50 years. The report also shows an obvious urban-rural divide. While there appears to be consistent progress at both fronts, a persistent gap between the rural and urban areas in terms of human development continues to exist.

The report notes that with the conflict in the north coming to an end, agriculture rehabilitation in this region would be a springboard to sustainable development of the region and the whole nation.

Uganda's recent discovery of petroleum resources will potentially have a positive impact on human development. While this will improve the GDP, focus on agriculture should remain high on the country's development agenda.

United Nations Development Programme (UNDP) Uganda
Plot 15B, Clement Hill Road,
P.O.Box 7184, Kampala, Uganda
Tel: (256)-414-233440/1/2/5
Fax: (256)-414-344801
E-mail: registry.ug@undp.org
Website: www.undp.or.ug

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