



# COMPREHENSIVE FOOD SECURITY AND VULNERABILITY ANALYSIS (CFSVA) APRIL 2013



# MILLIONS MISS OUT ON THE ECONOMIC BOOM IN AFRICA'S LAND OF PLENTY

Uganda is endowed with plentiful natural resources including fertile soils, regular rainfall, abundant lakes and rivers, deposits of copper, gold and other minerals and an estimated 3 billion barrels of soon-to-be-tapped oil reserves.

Since President Yoweri Museveni came to power in 1986 it has rebounded from the abyss of civil war and economic catastrophe to become relatively peaceful, stable and prosperous. While the global economic downturn has hit exports, GDP growth was still relatively strong at 6.7% in 2010/2011. On the back of subdued export performance, high inflation and subsequent tightening of monetary policy to restore macroeconomic stability, GDP growth is expected to slow to 4.3% in FY2011/12 and not beyond 5% in FY12/13.<sup>1</sup>

Uganda has taken great strides in reducing poverty, halving the countrywide incidence from 56% of the population in 1992 to 24.5% in 2009<sup>2</sup>. The reduction in poverty in urban areas has been especially marked. But the absolute number of poor people has increased due to population growth. Nearly 7.5 million Ugandans - or a quarter of the population - still live below the poverty line<sup>3</sup>. Poverty remains firmly entrenched in rural areas, which are home to 87% of Ugandans. About 30% of all rural people still live below the national rural poverty line.

More than a quarter of Ugandans are illiterate<sup>4</sup>, which locks them into a cycle of low paid work and perpetuates poverty and food insecurity.

## Key Points

- Nationally almost half (48%) of Ugandans are food energy deficient, spiking at 59% in northern Uganda, which is the most food insecure region.
- Low dietary diversity is a key problem especially in western Uganda, which also has the highest rates of childhood stunting.
- A third of Ugandan children are stunted, 14% severely so. Rural Ugandans are more likely to be stunted than urban.
- In northern and central regions wasting is rated 'poor' on the basis of the WHO guidelines (i.e. above 5%), peaking at 7% in northern Uganda.
- Rural households tend to consume more calories by bulking up on staples to fuel them to carry out a higher level of manual work, but they are more likely to forego diversity in their diet.
- Food insecurity and malnutrition are strongly associated with monetary poverty, which is firmly entrenched in rural areas, especially in the northern region.
- Food security is seasonal. The almost total dependence on rain-fed agriculture means harvests are way below their potential, especially in drought prone areas such as Karamoja. Nearly three quarters (74%) of northern Ugandan households had suffered drought /irregular rains in the year preceding the survey, which nearly always led to a decline in food production (94%) and income (81%).

<sup>1</sup>The World Bank

<sup>2</sup>The World Bank

<sup>3</sup>UNHS 2010. The poverty line is the minimum level of income deemed adequate in a given country.

<sup>4</sup>UNHS 2010



At almost seven children per woman the total fertility rate<sup>5</sup> is the second highest in the world after Niger<sup>6</sup>. Uganda's population of about 33 million is growing by 3.2% a year and is projected to reach 34.1 million by mid 2012.<sup>7</sup>

Although the incidence of HIV/AIDS has been reduced from around 10.5% in 1991 stabilising at about 6.5% since 2001, the actual number of people living with the disease has increased, now standing at 1.2 million (up from 1 million from 1991 – 2006).<sup>8</sup> The pandemic has killed large numbers of young adults and orphaned 1.2 million children, placing an extra economic burden on those who care for them.

The lives of hundreds of thousands of people in the north have been blighted by one of Africa's most brutal rebellions by the Lord's Resistance Army (LRA) led by Joseph Kony. Over the last two decades, tens of thousands have been abducted and killed and 1.8 million displaced<sup>9</sup>. The impact on people's lives in the north, especially in the north east district of Karamoja, cannot be underestimated, although progress has been made in addressing the displacement situation with almost 80% of IDPs having returned to their villages<sup>10</sup>.

The country has great agricultural potential. Overall about 81% of all households (4.2 million) are involved in agriculture though it's over 90% in the northern and western regions, and 69% are engaged in livestock production<sup>11</sup> with the eastern and northern regions the main livestock farming areas.

Households grow a wide variety of crops with more than 1.5m growing maize, beans and bananas and more than a million cassava and sweet potatoes.<sup>12</sup> Added to this many grow millet, sorghum, rice, field peas, cow peas, groundnuts, simsim, soya

beans and Irish potatoes: production of these crops all increased between UNHS 2005/06 and the Uganda Census of Agriculture 2008/09.

According to FAO figures the country produces enough plantain and cassava – the two most important staples – to feed its people. And it produces a surplus of maize and beans, the third and fifth most important food crops in term of caloric intake, enabling it to export to neighbouring deficit countries such as Kenya.

But if Uganda is to be able to feed its growing population it needs to increase yields in a sustainable way.

#### Ugandans have staple-heavy, protein-light diet

Uganda consumes a wide range of food staples by comparison with most countries in the region.

Matooke, cassava and maize are the most important staples in terms of caloric intake followed by sweet potatoes and beans. Rice and wheat are not traditional staples but they are growing in importance especially for urban and high income households. Groundnuts, sorghum, millet, Irish potatoes, peas, simsim and green leafy vegetables generally complement this diet.

On average Ugandans derive 69% of their food energy from staples though the proportion is higher in rural (71%) than urban (59%) Uganda. Eastern and western Ugandans are the most staple dependent by region, with households deriving around three quarters of their energy from staples. The lower the expenditure quintile the higher a household's dependency on staples.

Fruits, animal protein (meat/fish) and milk are consumed on average twice a week. Predictably, urban Ugandans and the wealthier eat considerably more fruits, meat, fish, eggs, milk, oil and sugar than rural Ugandans. Westerners and the poor derive hardly any of their energy from protein rich food groups.

<sup>5</sup>The average number of children that would be born if all women lived to the end of their child bearing years

<sup>6</sup>Uganda Demographic Health Survey 2006

<sup>7</sup>Uganda Bureau of Statistics (2007), Projections of Demographic trends in Uganda 2007-2017; vol. 1

<sup>8</sup>UNAIDS

<sup>9</sup>OCHA

<sup>10</sup>OCHA

<sup>11</sup>Livestock refers to all animals and birds kept or reared specifically for agricultural purposes including cattle, sheep, goats, pigs, horses, poultry, rabbits and donkeys. The definition is regardless of the number owned.

<sup>12</sup>Uganda Census of Agriculture 2008/2009

<sup>13</sup>The average number of children that would be born if all women lived to the end of their child bearing years

<sup>14</sup>Uganda Demographic Health Survey 2006

<sup>15</sup>Uganda Bureau of Statistics (2007), Projections of Demographic trends in Uganda 2007-2017; vol. 1

# LACK OF FOOD DIVERSITY AND HIGH STAPLE DEPENDENCY CHIEFLY A RURAL PROBLEM

Nationally, almost half (48%) of Ugandans are food energy deficient. In other words their regular diet fails to provide them with the minimum dietary energy requirement<sup>16</sup> to lead an active and healthy life. The proportion is relatively similar across regions and there is no difference between urban and rural Uganda, but the percentage spikes at 59% in northern Uganda, which is the most food insecure region. Some 12% of northern households are surviving on one meal a day compared with 6% at the national level.

Low dietary diversity remains a key problem especially in rural and western Uganda. More than 40% of rural Ugandans have low dietary diversity i.e., they consumed food from fewer than five out of seven food groups in the week leading up to the survey. In the west well over half (55%) have a diet that's lacking in diversity.

More than a fifth of rural Ugandans have 'unacceptable' (i.e., poor or borderline) food consumption. This measurement combines food diversity, food frequency (the number of days each food group is consumed) and the relative nutritional importance of different food groups. Nearly 5% have poor food consumption which represents an extremely unbalanced, likely energy deficient, protein-lacking

diet, chiefly composed of starchy maize or matooke (plantain) flavoured with some vegetables.

Food insecurity is more of a rural phenomenon across all food security indicators except energy deficiency. For instance nearly half of rural households get more than 75% of their energy from staples compared with a fifth in towns and cities.

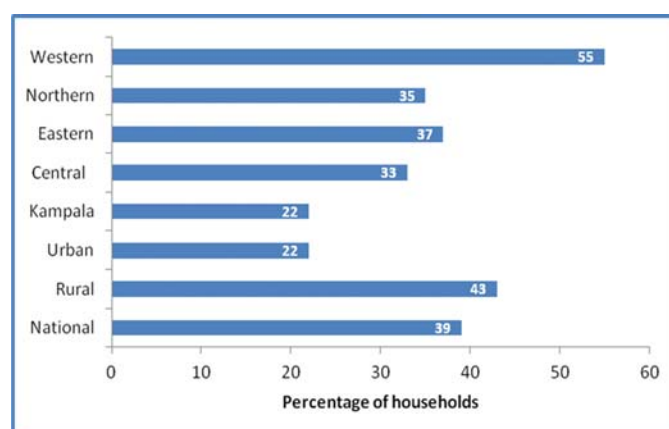


Figure 1: Percentage of households with low dietary diversity

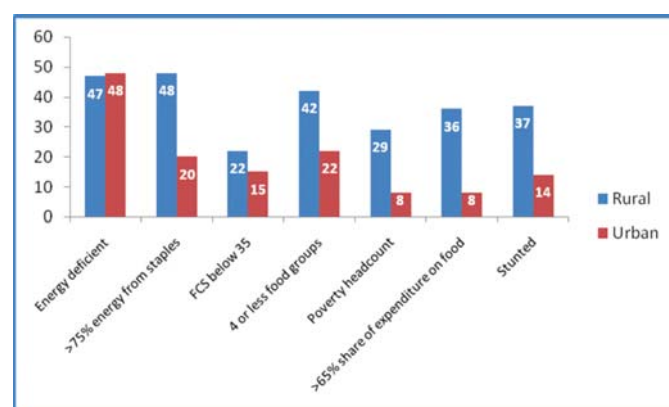


Figure 2: Selected food security indicators urban versus rural

<sup>16</sup>Population with daily energy consumption below daily energy requirements (based on age/sex/activity level of HH members) according to FAO 2005. Recommendation for light activity see IFPRI 2007 appendix 8

# NUTRITION – STUNTING IS ‘SERIOUS’ IN RURAL UGANDA AND ‘CRITICAL’ IN WESTERN

More than a third of Ugandan children under five are stunted or short for their age, a rate that is classified as “serious” by WHO thresholds<sup>17</sup>. The rate is higher than average in eastern Uganda (36%) and deemed “critical” in western (42%). Boys are slightly more likely to be stunted than girls as are rural Ugandan children by comparison with their urban counterparts (37% vs 14%).

Stunting is a measurement of chronic malnutrition and is associated with long term factors such as chronically inadequate levels of protein and energy intake, micronutrient deficiencies, frequent infection, inappropriate feeding practices over a sustained period and household poverty.

Nationally, the prevalence of wasting or global acute malnutrition (GAM) in under fives is 5% with children in rural areas twice as likely to have acute malnutrition as urban children (2%). In northern and central regions it is rated ‘poor’ on the basis of the WHO guidelines (i.e. above 5%), peaking at 7% in northern Uganda.

Overall, 15% of under fives are underweight (low weight for a specific age and sex) though again prevalences are higher in rural Uganda and in the north (18%).

The stunting rate is higher than average in eastern Uganda and, at 42%, is deemed critical in western

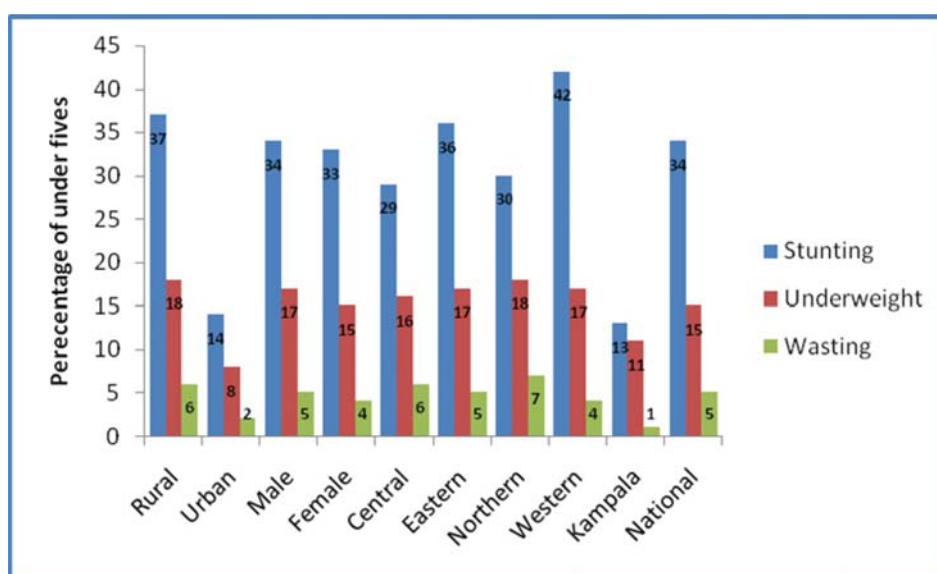


Figure 3: Nutritional status of children aged 6-59 months

<sup>17</sup>According to WHO thresholds chronic malnutrition (height for age) is acceptable when 20% are < -2 z-scores, poor for 20-29%, serious for 30-39% and critical when 40% or more are below -2 z scores.





## WHAT CAUSES THESE HIGH LEVELS OF STUNTING?

A household's overall food security status greatly impacts on the nutritional status of the under fives. There is a clear link between over dependency on staples and stunting, which is demonstrated in western Uganda. Children in households with a higher share of expenditure on food, lower FCS, lower dietary diversity and higher share of energy from staples are more likely to be stunted (though there is no correlation between low calorific intake and stunting).

However, poor diet is not the only cause of malnutrition. Stunting is associated with long term factors such as chronically inadequate levels of protein and energy intake, micronutrient deficiencies, frequent infection, inappropriate feeding practices over a sustained period and household poverty. Use of unsafe water, lack of sanitation and inadequate access to maternal and child health services can all lead to ill-health. Hence we have a vicious circle: many factors cause illness which can cause malnutrition – and malnutrition itself exposes people to sickness and disease.

**The survey has highlighted the following areas of concern:**

<b>Initiation of breastfeeding</b>	Early initiation is progressing, but almost one in five children were still not put to the breast within the first six hours of life
<b>Vitamin A</b>	Three in ten under twos did not take a vit A capsule in the six months preceding the survey – rising to four in 10 in north and west and the lowest welfare quintile.
<b>Diarrhoea</b>	A third of under twos had diarrhoea in the fortnight preceding the survey. Again, children in rural Uganda, the north and the lowest quintile were more likely to be afflicted. For 20% it contained blood – rising to 37% in the north. Despite the risk of dehydration resulting from a diarrhoea episode almost half (45%) were given the same or somewhat less to drink and 36% much less to drink.
<b>Malaria signified by fever</b>	Malaria, which is one of the leading causes of morbidity and mortality in Uganda, is often signified by fever. Half of under twos had fever in the two weeks preceding the survey though it was less in urban areas (42%). Once again the prevalence was considerably higher among children in the north (60%).
<b>Vaccination rates</b>	More than a quarter (27%) of children hadn't been vaccinated against measles and a fifth hadn't been vaccinated against diphtheria, pertussis (whooping cough) and tetanus (DPT3). Children in the north were less likely to be vaccinated than elsewhere. The poorer the household, the less likely the children were to be immunised against measles or DPT3.
<b>Sanitation and drinking water</b>	More than a quarter of households (28%) had unimproved drinking water and 7% no toilet facilities. In the north almost a quarter of households had no toilets, whilst drinking water sources were least improved in central and western Uganda.



# POVERTY IS ROOT CAUSE OF FOOD INSECURITY AND MALNUTRITION

Poor households lack the resources required to access enough nutritious food to live a healthy active life. Poor farmers are unable to invest in the inputs required to boost their own yields and have to sell any surplus soon after harvest to earn income and repay debts, at once exposing themselves to fluctuating market prices as well as not being able to benefit from selling when prices rise.

The poorer the household the more likely it is to be food energy deficient, to have low dietary diversity, to derive more energy from staples and have poor or borderline food consumption (figure 4). Some 15% of the bottom fifth of the population (in terms of expenditure) have a poor food consumption score, compared with a 5% national average, three quarters have low dietary diversity and more than half are deficient in food energy.

Some 16% of those in the lowest wealth quintile are surviving on one meal a day. Overall, two in five households restrict themselves to two meals a day though the proportion is again

much higher for the poorest. And the poorer the household the more likely it is to have stunted and underweight children.

Poverty also underlies the fact that female-headed households are more food insecure in terms of food diversity, deficiency and the FCS, than those headed by men. This inequality stems from the fact that they have only one bread winner and a high dependency ratio. They work far longer hours than men and bear the double burden of ensuring that their households are fed adequately while caring for the sick, elderly and for orphaned children. For instance the HIV/AIDS pandemic (6.5% of the population or 1.2 million people have the disease<sup>18</sup>) has killed large numbers of young adults and orphaned 1.2 million children, placing an extra economic burden on those who care for them.

Women are less likely to get loans (44.5% vs 39%) and, across all regions, far less likely to be able to read or write, especially in rural Uganda and the north and east, locking them into a cycle of low paid work, poverty and food insecurity.

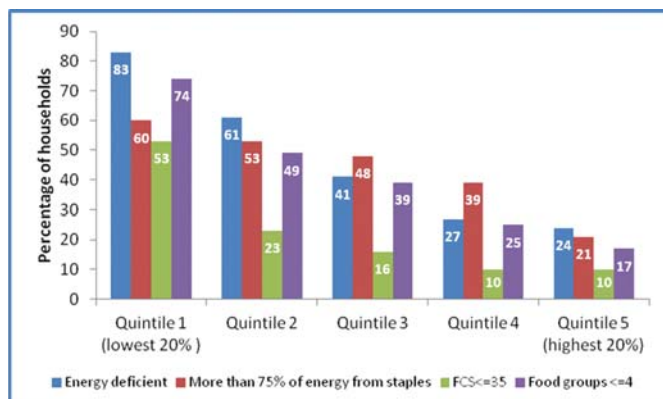


Figure 4: Food security indicators by expenditure quintile

Poverty and lack of education go hand in hand. Children from the poorest households are forced to drop out of school for lack of money and because they are needed to work. As adults, the illiterate and uneducated are less likely to command well paid jobs, so they become stuck in a loop of poverty and food insecurity. They are also less knowledgeable about feeding practices and the importance of nutrition. Overall, a fifth of Ugandan households are headed by someone with no education.

<sup>18</sup>UNAIDS



## DROUGHT DRIVES SEASONAL FOOD SCARCITY

Nationally, some 44% of households reported having had a situation when they did not have enough food to feed household members in the year before the survey (September 2008 – 2009) with shortages peaking in January and February 2009, when more than half of those with poor and borderline food consumption faced shortages.

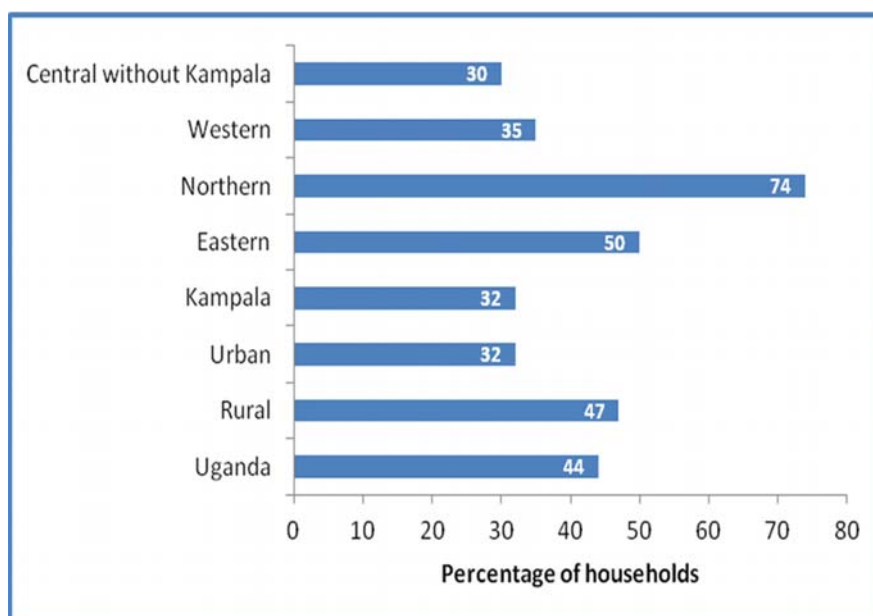
Shortages were most acute in northern Uganda where nearly three quarters of households experienced a time when they didn't have enough to eat, followed by the eastern region.

Unlike the rest of the country which has two rainy seasons (March – June and mid August – December), two dry seasons and two harvests, Karamoja in northern Uganda has a 'unimodal' climate with just one harvest running from October to January and a hunger season that generally lasts from April through to August -

though this can often last longer depending on climatic conditions.

The overwhelming cause of food shortages is drought. Nearly half (46%) of Ugandan households said they had suffered drought /irregular rains in the last year. In the north the proportion was as high as 74%. Nearly all households that experienced drought claimed the shock had led to a decline in food production (94%) and income (81%).

So how do Ugandan households cope when their food production and income is hit by drought? Two fifths are forced to change their dietary patterns such as eating less preferred food, cutting portion sizes or skipping meals. Some 12% of northern households are surviving on one meal a day and nearly half of households in the north and west eat just twice daily.



**Figure 5:** Households that reported they did not have enough to eat by place of residence and region (%)

# SUBSISTENCE FARMERS ARE FAILING TO CAPITALIZE ON UGANDA'S ECONOMIC BOOM

Almost a fifth of Ugandans are dependent on the livelihood of 'rural mixed subsistence farming only'<sup>19</sup> and the same proportion again on 'rural subsistence farming and non agricultural enterprises'. In western Uganda as many as a third rely on subsistence farming alone. These hundreds of thousands engaged in subsistence rain-fed farming in remote areas scattered throughout the country constitute some of Uganda's poorest and least educated households.

A quarter of subsistence farmers have unacceptable food consumption (compared with a fifth nationally) and some 52% low dietary diversity. Some 37% live below the national poverty line compared with 24.5% of all households.

These farmers are not benefiting from Uganda's steady economic growth and modernization. They lack inputs and technology to help them increase their yields and reduce pests and disease. They lack access to financial services, which would enable them to boost their incomes – both by improving and expanding their production, and by establishing small enterprises<sup>20</sup>.

Households reliant on a combination of subsistence crop farming and local remittances fare no better. Again a quarter have unacceptable FC, more than half are energy deficient and 47% have low dietary diversity. Again they are more

likely to have no formal education and to be in the lowest two welfare quintiles.

However, when farmers also engage in non-agricultural enterprises their food security situation improves dramatically, indicating that subsistence farming is positive if the household is diversifying its income.

As far as agricultural production and yields are concerned, land scarcity is a constraint. On average agricultural households have 1.34 hectares and 61% cultivate less than a hectare. Those in the north and west have more parcels of land available, but often it takes them longer to reach them. In the north, almost a fifth of farmers take two hours or more to access some of their land, which could prevent them from cultivating well or frequently, thereby limiting food availability.

Limited use of inputs including improved seed, fertilizers, herbicides/ fungicides and traction power by farmers constrains growth of agricultural productivity.<sup>21</sup> Just 300,000 farming households use irrigation, which means harvests are way below their potential, especially in drought prone areas such as Karamoja.<sup>22</sup> Use of organic fertilizers is very low at 6% and chemical fertilizers almost negligible at only 1.5%. Just 5% of households use pesticides/herbicides - varying from 10% in the central region to 2% in the north.<sup>23</sup>

<sup>19</sup>Subsistence farmers are defined as persons who grow crops largely for home consumption though they occasionally sell any surpluses for money.

<sup>20</sup>[www.ifad.org](http://www.ifad.org)

<sup>21</sup>Ministry of Finance Planning and Economic Development (MFPED), 2008, MAAIF, 2010

<sup>22</sup>Ministry of Agriculture, Animal Industry and Fisheries, Statistical Abstract 2011

<sup>23</sup>Please note these statistics refer to all farmers and not just subsistence

## CONCLUSION

The report confirms that food security cannot be viewed in one dimension: while the north suffers most from seasonal food deficits exacerbated by drought, it is in the west that lack of food diversity and stunting are more concerning.

As underlined in this report, special attention needs to be given to the north which suffers from so many of the factors that underlie food insecurity and malnutrition such as regular rainfall deficits, the effects of a long conflict, low education levels and extreme poverty.

Lower level analysis, particularly in these regions is required to ascertain how programme and policy decisions could target these areas.

The poorest sections of society have been excluded from Uganda's steady economic transformation.

The absolute numbers of poor will rise exponentially if so many continue to remain illiterate and if the fertility rate and high population growth does not abate. As explained in the report poverty underpins all aspects of food insecurity.

Illiteracy rates remain appallingly high amongst women in northern and eastern Uganda. This urgently needs addressing to stop women from becoming trapped in low paid work, poverty



and poor child feeding and caring practices. Smallholder farmers desperately need to be able to invest in inputs and improved techniques to give them some protection against drought. They need investment so they can take full advantage of Uganda's fertile soils and abundant water sources to boost their yields. But they need guidance and training if this is to be done in a sustainable way.

A household's overall food security status greatly impacts on the nutritional status of the under fives. This is strongly the case in western Uganda where stunting rates are the most serious in the country and diversity the poorest.

But other factors need to be addressed to improve child nutrition in Uganda. Child illness rates could be lowered by improving hygiene practices and treatment for diarrhoea, boosting immunisation and vitamin A coverage and taking action to lower malaria rates. Programmes to promote the benefits of early initiation of breastfeeding and adequate child feeding practices must be ongoing.

Food insecurity cannot be viewed in one dimension - while the north suffers most from seasonal food deficits exacerbated by drought, it is in the west that lack of food diversity and stunting are most concerning.





**World Food  
Programme**

**For more information please contact:**

**Astrid Mathiassen**

[astrid.mathiassen@wfp.org](mailto:astrid.mathiassen@wfp.org)

**Katy Williams**

[katharine.williams@wfp.org](mailto:katharine.williams@wfp.org)

