

## **POPULATION, AGRICULTURE AND FOOD SECURITY IN NTOROKO DISTRICT, UGANDA**

In Uganda, nearly 1.4 million people are currently food insecure despite the country's abundant resources as the prevalence of food energy deficiency in the country stands at 37%. Challenges to food Security include the underdeveloped Agricultural Sector characterized by over reliance on primary agriculture, low fertility soils, minimal use of external farm inputs, environmental degradation, and significant food crop loss both pre and post harvest, minimal value addition coupled with minimal product differentiation and inadequate food storage and preservation that result in significant commodity price fluctuation. Additionally, food production is vulnerable to adverse weather conditions. The overall farm input investment including fertilizers, seeds, and technology adoption is very low. Access to fertilizer use is constrained by market liberalization and trade policies that increase fertilizer prices relative to commodity prices. This is worsened by the limited access to markets, infrastructures as well as poor handling and storage coupled with post-harvest losses.

According to a report by the World Food Programme (WFP), about 6.1 million (21%) people in Uganda are undernourished. At household level, about 6.3% of the households in Uganda are food insecure, which situation is more worsened among the natural resources dependant households. With 74% of the households being under subsistence farming, the risk of vulnerability to starvation is further increased during environmental stress, drought and floods because of over dependence on rain-fed agriculture. Owing to the increasing population growth on limited land area with decreasing crop yields, the farmer's means of increasing food production has always been by expanding the area under cultivation to virgin and fragile areas, especially wetlands. Consequently, Uganda has lost about 11,268 km<sup>2</sup> of wetland, down from 37,575 km<sup>2</sup> (15.6%) in 1994 to about 26,308 km<sup>2</sup> (10.9%) in 2009. This represents a loss of 30% of the country's wetlands. While the environmental importance of wetland ecosystems is widely recognized, their contribution to household food security is still hardly explored whether in form of weather modifications , nutrient retention or direct increased food crop production

Ntoroko district, with a moderate population of 252 persons per km<sup>2</sup> is characterized by small-scale subsistence farming of crops with high predominancy in pastoralism

exhibiting high level of food insecurity which is further aggravated by low per capita food availability, high fluctuations in food supply and lack of innovative ideas as well as responsive policies for sustainable use and management of natural resources. With a human population of 73,200 people, having an annual growth rate of 5%, only 40% of the land area in Ntoroko district (544 km<sup>2</sup>) is for arable agriculture with cultivation being only along the hilly terrain along the mountainous ranges of Mt Rwenzori though highly prone to immense soil erosion. On the other hand, the Northern low lying flat areas are prone to flooding and over grazing and under communal extensive system.

In the district, some surveys on food security, household incomes and expenditure were conducted in 2011 under the National Agricultural program. From the study, 83% of the households experienced food insecurity and that men owned 51.8 % of land, women 12.3 % and both jointly owned 35.9 %. In regard to food security, the survey revealed that 59.2 percent of people eat less than 3 meals per day and 83 % of the respondents attributed this food insecurity to crop failure. As far as household expenditure were concerned, spending on food, health and education were 50.4 %, 21% and 18.3% respectively. In line with land utilisation at village level, women were by far the main cultivators of the fields (70%) though denied land ownership (ASPS Inception Report, 2001).

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However, the focus should not only be on food security but also on consequences of nutrition deficiencies especially of iron, iodine, Vitamin A as well as stunted growth. Its estimated that about 157,000 child deaths are to occur between 2006 to 2016 due to vitamin A deficiency alone, while 425,000 children to die due to protein energy malnutrition like marasmus, kwashiorkor and stunting. Nutritional problems in Uganda according to the Uganda demographic health survey indicate that 39 % of children less than five years of age are stunted, 9% of women of reproductive age have chronic energy deficiency. Over 65 % of children less than five years of age and

30 % of women 15-49 years of age are anemic, while 28% of children and 52% of women are vitamin A deficient.

The current food security and nutrition sustainability plan in Ntoroko district focuses mainly on strengthening food availability, food accessibility , food utilization and food stability through women empowerment and establishment multiplication sites of high yielding and fortified seeds and planting materials for distribution to households especially cassava, yams , sweet potatoes and beans fortified majorly with Vitamin A and iron respectively coupled with appropriate farming technologies that ensured sustainable use of wetland resources for food security. In the last 03 years, 206 cassava multiplication sites of *Nase 13* and *Nase 14* have been set up and cuttings directly distributed to 2,698 farming household to boost food security status with hope that they will share some of their harvest with their neighbors and also store food for hard times. Also, 4,079 farming households being given improved quick maturing livestock breed such as kuroiler poultry chicks and Boer goats. This has been coupled with simple irrigation techniques under modern farming practices and organizing women in to farming groups with saving schemes

Nationally, the government of Uganda as a nation has put in place strategies that hold good prospects for substantially alleviating food security through nutritional interventions, facilitating market access by removal of trade barriers as a way to open up markets in the hope that their people will benefit. Uganda has been focusing more on scientific education with affirmative attention at all levels, research and development, access to capital through SACCO's and infrastructure development inclusive of rural electrification and road/market establishments. This has been coupled with gender sensitive development manifested by the shift from man lead leadership to woman lead leadership as one moves from subsistence farming to market driven farming. Women are important as food producers, managers of natural resources, income earners and caretakers of household food security. Agricultural productivity has been said to increase by as much as 20 % when women are given the same inputs as men, Also, good governance is being strengthened over the years with provision of safety nets to vulnerable groups and inclusion of the minority in decision-making. However, there is need to delink political interests from the basic needs of a nation when it comes to food production in relation to food security. More

often than not sustainable food security measures are long-term strategies, which need to be protected from volatile political interests of leaders.

In conclusion, understanding environmental importance of wetland ecosystems and potential contribution of wetland resources to household and people's food security with current population growth trends may be vital in steering decisions that minimize negative impacts or enhance the benefits that wetlands have for communities. There is thus a need to design appropriate food production and farming techniques in a gender sensitive manner that ensure sustainable food security even in wetlands using suitable crops such as *Dioscorea* spp (yams), beans, *Zea mays* (maize), *Ipomoea batatas* (L.) Lam. (sweet potatoes), *Manihot esculenta* Crantz (cassava), *Brassica oleracea* var. *capitata* (cabbages), *Saccharum officinale* (sugar cane) and low land rice.

This will in so doing strengthen the food Security targets and the Millennium Development Goals (MDG 1) of halving the proportion of people who suffer from hunger by 2015, and MDG 7 on environmental sustainability.