

NANUMBA NORTH

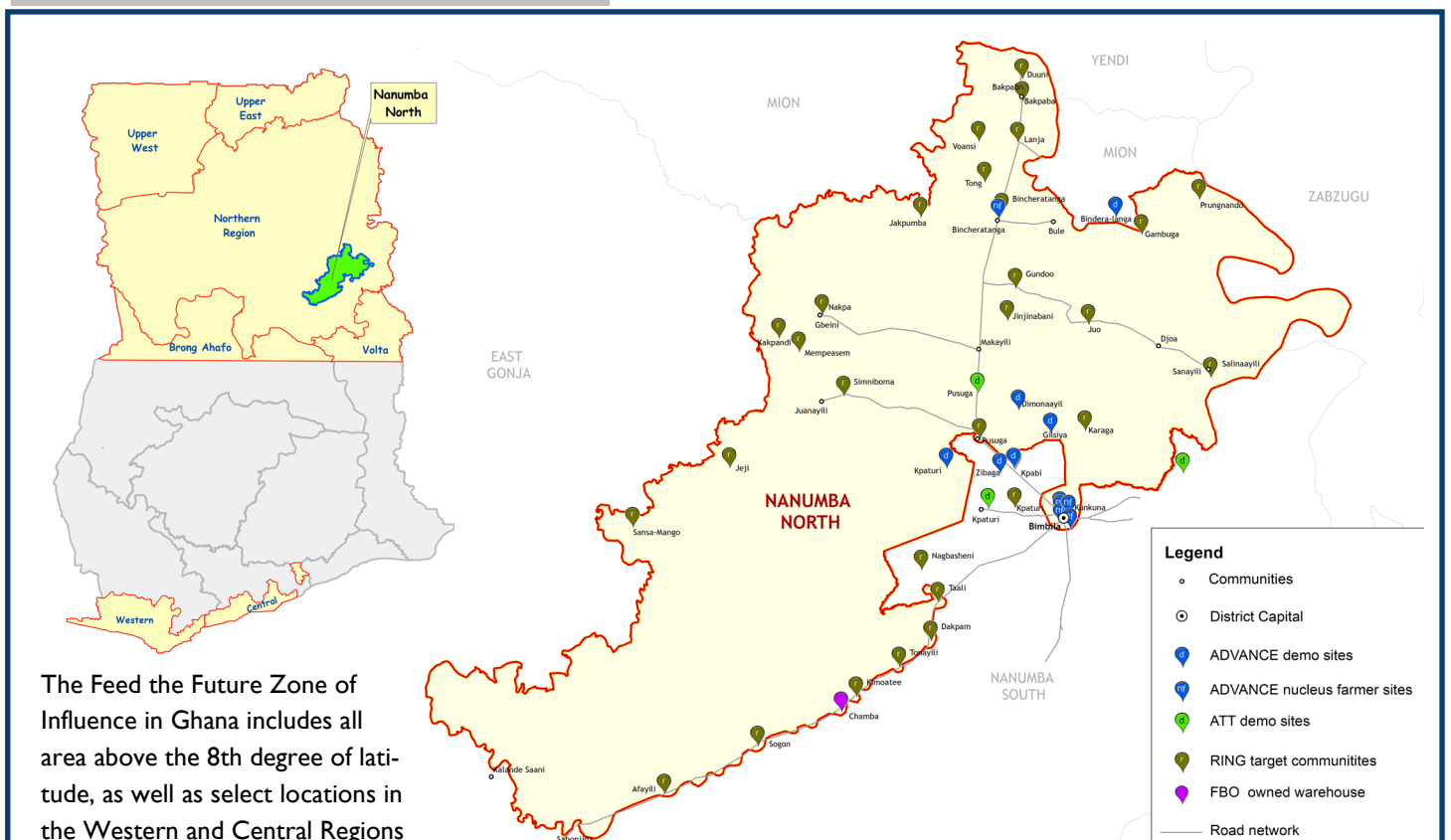
Feed the Future Ghana District Profile Series—Draft (October 2016)

DISTRICT PROFILE CONTENT

1. Cover Page
2. USAID Project Data
- 3-5. Agricultural Data
6. Health, Nutrition and Sanitation
7. USAID Presence
8. Demographic and Weather Data
9. Discussion Questions

Nanumba North is a district in Ghana's Northern Region. It is bordered in the north by Mion, Yendi and Zabzugu, in the West by East Gonja and South and South East by Nanumba South. The total surface area is 2,260 square kilometers.

The district has a total population of 157, 859 (projected from GSS 2010 Population and Housing Census) people, 79,816 females and 78,043 males with an average household size of 6.9 persons. The prevalence of poverty in Nanumba North is 9.4% and the average daily per capita expenditure is US \$4.7.



The Feed the Future Zone of Influence in Ghana includes all area above the 8th degree of latitude, as well as select locations in the Western and Central Regions

This section contains data and information related to USAID sponsored interventions in Nanumba North

Table I: USAID Project Data for Nanumba North, 2014-2015

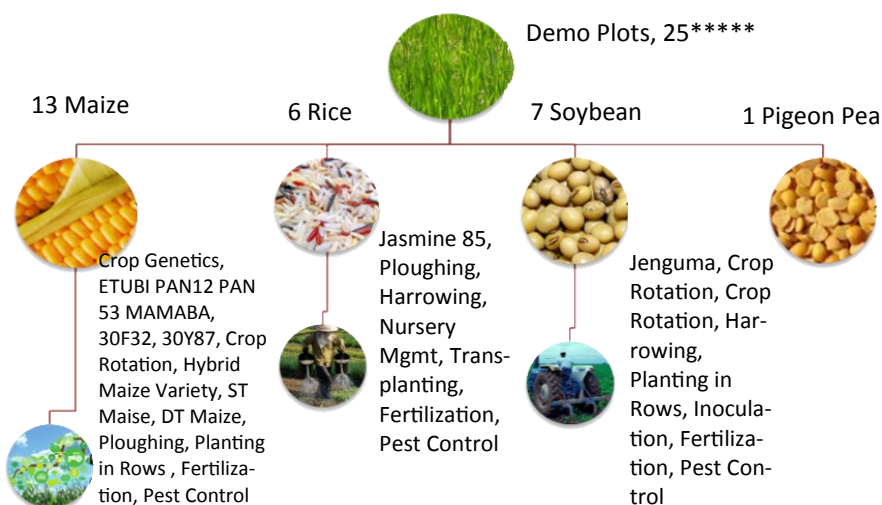
Beneficiaries Data	2014	2015
Direct Beneficiaries*	690	1,834
Male	Disaggregate n/a	894
Female	Disaggregate n/a	447
Undefined	690	493
Nucleus Farmers	8	5
Male	8	5
Female	-	-
Demo plots	12	13
Male	8	7
Unknown	7	12
Maize Gross Margin USD/ha	n/a	594.3
Maize Yield MT/ha	n/a	3.21
Soya Gross Margin USD/ha	n/a	439.0
Soya Yield MT/ha	n/a	1.55
Ag. Rural loans	-	-
Number of Projects Present****		3
Presence Score**		0.6
USAID District Presence vs. Impact Flag		Yellow

Source: USAID Project Reporting, 2014-2015

The number of direct USAID beneficiaries has nearly tripled in Nanumba North from 690 in 2014 to 1,834 in 2015. Thirteen nucleus farmers are currently operating in the district and 25 demonstration plots have been established to support beneficiary training. See Infographic I for the demonstration plot disaggregate. In addition, the yields and gross margins of USAID direct beneficiaries have increased and are above district averages, see table I. The presence of USAID development work is relatively low as compared to other districts. This results in a low USAID presence score of ** (0.6). The district is therefore flagged **Yellow***** indicating that the impact indicators have increased regardless of the low USAID presence. Find more detail on USAID Presence v. Impact scoring on page 7.

The presence calculation is provisional and only includes the number of direct beneficiaries and Agricultural Rural loans. The calculation will be revised to include "area under improved technology", as well as updated direct beneficiaries numbers with 2015/2016 data. Once the data is updated the USAID presence score for Nanumba North is likely to change.

Infographic 1: Demo Plots in Nanumba North, 2014-2015



Source:: USAID Project Reporting, 2014, 2015

* "Direct Beneficiary, an individual who comes in direct contact with a set of interventions" FTF Handbook, 2016, ***See page 6 for more detail, **** ATT, ADVANCE and RING, *****Please note that the number of demo plots is smaller than the sum of separate plots by crop because crop rotation in the same demo

AGRICULTURAL DATA

This section contains agricultural data for Nanumba North, such as production by commodity, gross margins and yields.

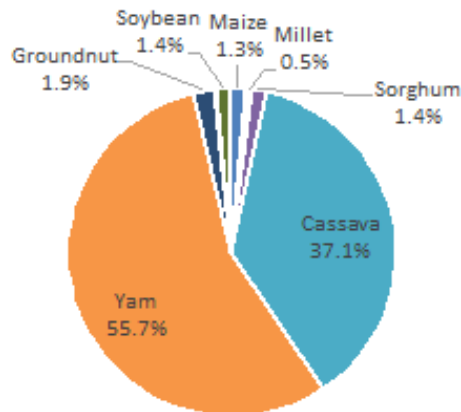
Agriculture production in Nanumba North is largely focused on Cassava and Yams, which represent the major staple foods grown by farmers and constitute 90 percent of overall production. Other commodities produced include groundnuts, maize, sorghum and rice, see figure 1.

The average gross margin calculations were obtained from USAID project reporting (2015) and the Agriculture Production Survey (K-State, APS 2013), see figure 2. It is clear that USAID direct beneficiaries obtained considerably higher gross margins than the 2013 average. Figure 2 shows that gross margins for Soybeans were almost double the district average. For Maize, gross margins were astonishingly 12 times the district average.

Yield data, presented in figure 3, contains values from direct USAID beneficiaries, the 2013 APS and MoFA Production Surveys. Similar to gross margins, yields of maize for USAID direct beneficiaries are more than double the district averages reported by MOFA in 2014 and 12 times higher than the yields reported by the 2013 Agriculture Production Survey. Conversely, soybean yields reported by MOFA are slightly higher than that of direct USAID beneficiaries.

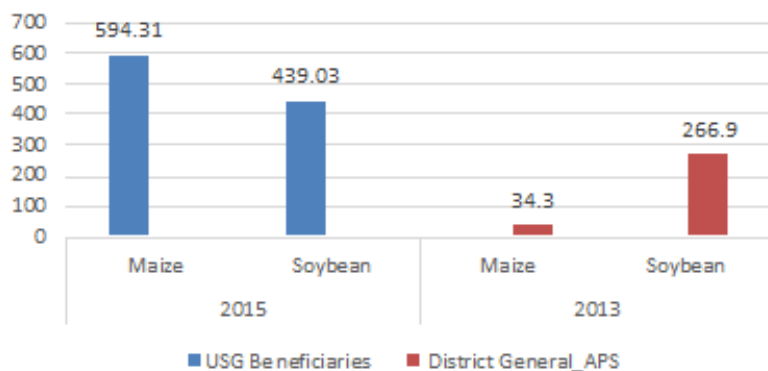
Figure 4 below shows that the majority of household incomes in Nanumba North rely on the agricultural sector and farming. Overwhelmingly, at almost 80%, is the sale of crops/produce.

Figure 1: Nanumba North: Share of ag. production by commodity, 2011-2014



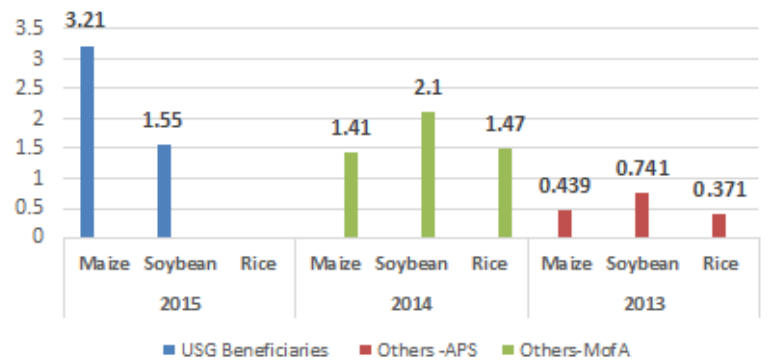
Source: Agriculture Production Reports 2011 - 2014, MOFA

Figure 2: Average Gross Margin of USAID beneficiaries and district general, 2013-2015, in USD



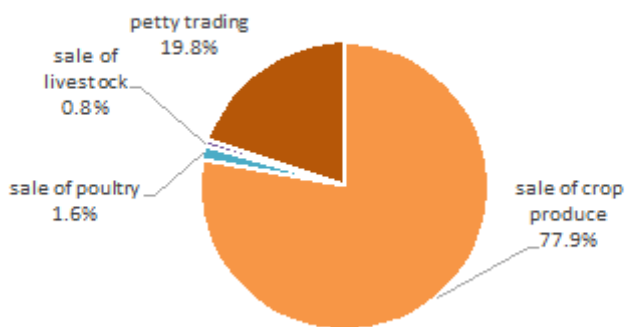
Source: USAID Project Reporting 2015, Agriculture Production Survey, K-State 2013
*Gross margin values captured from the APS in figure 2 have been converted to USD using 2012 exchange rates (1.88 GHC to \$1 USD) to align with the 'farmer recall' survey methodology deployed.

Figure 3: Yields of Maize and Soybean, beneficiaries and others, 2013-2015, MT/ha



Source: USAID Project Reporting 2015, Agriculture Report 2014, MOFA 2014 Production Data, Agriculture Production Survey, K-State, 2013

Figure 4: Nanumba North: Household Income type, 2015



Source: Ring & Spring Survey, 2015 USAID METSS Project

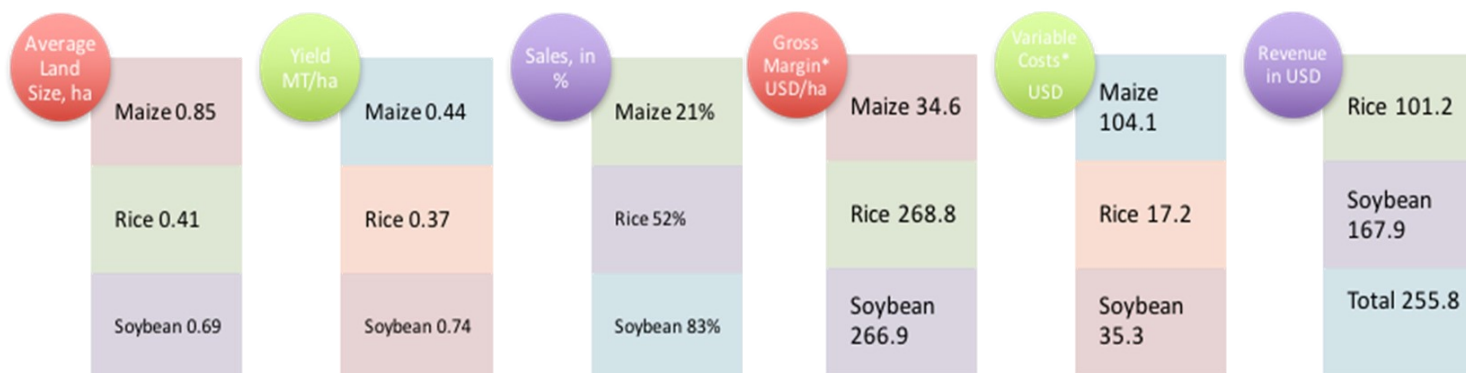
Table 2: Agriculture Production and yields in Nanumba North during 2011-2014, in MT and MT/ha

Production in MT					
Commodity	2014	2013	2012	2011	Total
Maize	6,820	7,214	7,891	6,930	28,855
Rice	1,245	1,003	978	1,057	4,283
Millet	2,699	2,524	2,750	3,003	10,976
Sorghum	7,668	7,063	7,613	8,094	30,438
Cassava	215,077	239,284	192,001	167,400	813,762
Yam	329,385	380,817	268,830	242,088	1,221,120
Groundnut	9,720	9,648	10,929	11,885	42,182
Cowpea	1,991	1,823	2,112	2,173	8,099
Soybean	7,333	7,097	8,316	8,735	31,481
Yields in MT/Ha					
	2014	2013	2012	2011	
Maize	1.41	1.45	1.54	1.50	
Rice	1.47	1.31	1.32	1.34	
Millet	1.58	1.40	1.41	1.43	
Sorghum	2.20	1.98	2.03	2.13	
Cassava	19.97	21.30	18.95	18.00	
Yam	21.94	23.99	18.54	18.34	
Groundnut	2.00	1.71	1.72	1.73	
Cowpea	2.21	1.87	1.92	1.94	
Soybean	2.10	1.94	1.98	2.03	

Source: Agriculture Report 2011, 2012, 2013, 2014, MOFA

Table 2 above provides detailed information on specific commodities in regards to overall production in Nanumba North, as well as average yields for the years 2011-2014. Note that 2015 MoFA data is under review and will be made available before the end of 2016. The infographic below shows a summary of agricultural statistics for Nanumba North. The first bar indicates the relatively small farm size by commodity with average farm plots at 0.85, 0.41 and 0.69 ha respectively for maize, rice, and soybean. Other agricultural data associated with Nanumba North, including variable costs per hectare and commodity, as well as farm revenue can also be seen below in infographic 2.

Infographic 2: Average Land size, Yields, Sales and other Farm indicators in Nanumba North, 2013



Source: Agriculture Production Survey, Kansas State University, 2013 *Gross margin, variable cost and farm revenue captured from the APS in infographic 2 have been converted to USD using 2012 exchange rates (1.88 GHC to \$1 USD) to align with the 'farmer recall' survey methodology deployed.

AGRICULTURAL DATA

This section contains information on domains of empowerment of the Women Empowerment in Agriculture Index (WEAI) for Nanumba North

What is the Women Empowerment in Agriculture Index?

Women play a prominent role in agriculture. Yet they face persistent economic and social constraints. Women's empowerment is a main focus of Feed the Future in order to achieve its objectives of inclusive agriculture sector growth and improved nutritional status. The WEAI is comprised of two weighted sub-indexes: Domains Empowerment Index (5DE) and Gender Parity Index (GPI). The 5DE index is a summation of the level of achievement in ten indicators grouped into five domains: production, resources, income, leadership and time. The GPI compares the empowerment of women to the empowerment of their male counterpart in the household. This section presents the results from these empowerment indicators of the 5DE for Nanumba North, part of a bigger survey conducted by Kansas State University.

The Domains: what do they represent?

The *Production* domain assesses the ability of individuals to provide input and autonomously make decisions about agricultural production. The *Resources* domain reflects individuals' control over and access to productive resources. The *Income* domain monitors individuals' ability to direct the financial resources derived from agricultural production or other sources. The *Leadership* domain reflects individuals' social capital and comfort speaking in public within their community. The *Time* domain reflects individuals' workload and satisfaction with leisure time.

Nanumba North WEAI Results

Both male and female respondents results on 4 domains are displayed in Figure 5.

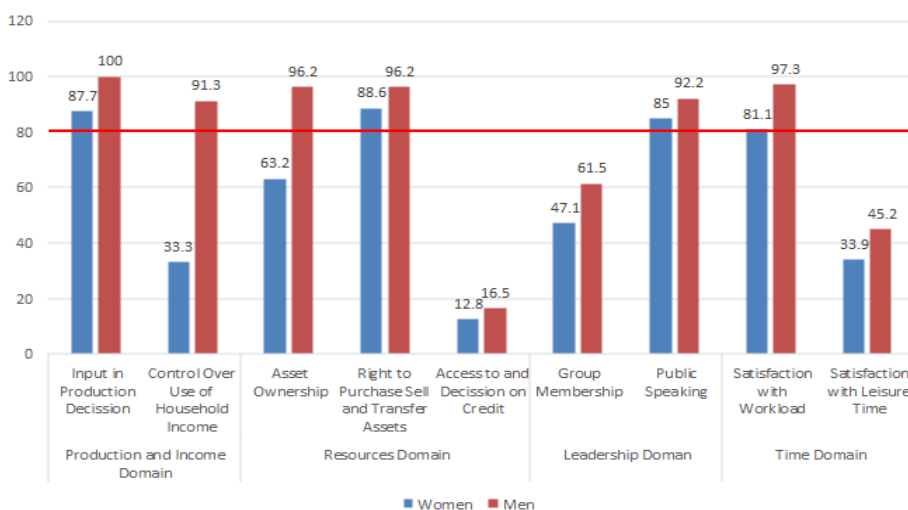
Production Domain: women feel comfortable with providing input related to production decisions, confirmed by 87.7% of the women of the survey sample, however they have much less control over use of household income than men, 33.3% of women versus 91.3% of male respondents.

Resource Domain: a majority of the women have the right to asset ownership and to purchase and move assets, 63.2% and 88.6% respectively; these figures are lower than the figures of male respondents. Only 12.8% of women have the right to decide or access to credit, followed by 16.5% of the male respondents. Access to credit is almost equally low for both genders.

Leadership Domain: Nanumba North holds the highest percentage of women involved in public speaking, or speaking freely in public in the Northern Region; 85.0% of the women interview confirm this. However only 47.1% of them have scored adequacy in the right to group membership as opposed to 61.5% of the male respondents.

Time Domain: The majority of women and men in Nanumba North are satisfied with the workload in their everyday life, 81.1% and 97.3% respectively, the percentages dropped significantly with respect to satisfaction with leisure time; one third of the women and less than half of men interviewed are happy with this aspect.

Figure 5: Domains of Empowerment of WEAI Index, expressed in percent, Nanumba North, 2015



Adequacy and Differences

Together men and women obtained an adequacy score (80% and above) in all indicators except for Access to and Decision on credit, Group membership and Satisfaction with leisure time. In addition, while men obtained adequacy in control over use of household income and asset ownership, women did not.

The highest difference between male and female respondents was observed with the production domain: the control over use of household income and in the resources domain: the right to asset ownership.



USAID
FROM THE AMERICAN PEOPLE

HEALTH, NUTRITION AND SANITATION

This section contains facts and figures related to Health, Nutrition, Sanitation in Nanumba North



People with knowledge of 3 critical times for hand washing
89.1%**

People with improved sanitation facilities
5.9%**

People with no knowledge and inadequate knowledge of aflatoxin levels
92.1%**

People with improved hand wash facilities
16.8%**

Sources: * from PBS 2015, Kansas State University, ** from Ring & Spring Survey, 2015,

Figure 6: Types of improved water source, METSS 2015

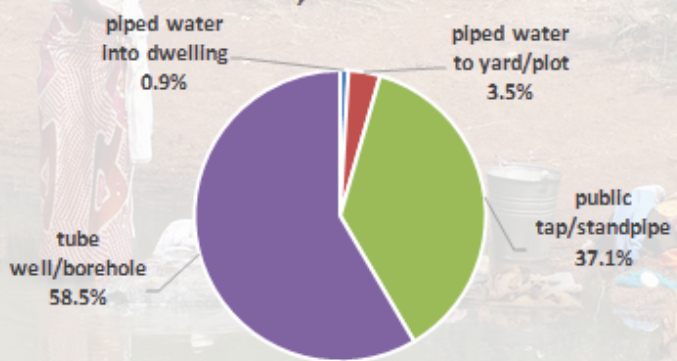
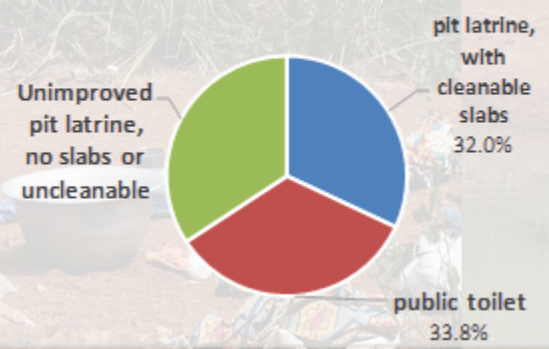


Figure 7: Types of Improved Sanitation, METSS 2015



PRESENCE VS. IMPACT MATRIX

This section provides an analysis of USAID presence vis-a-vis impact indicators in Nanumba North

The USAID Presence vs. Impact matrix reveals, in more detail than previously available, the impact that USAID Feed the Future presence in a district is having on key impact indicators captured from the 2012 and 2015 Feed the Future Population Based Survey. The following graphs are a print screen of the Presence vs. Impact Dashboard when Nanumba North is selected. Both key impact indicators, 'prevalence of poverty' and 'per capita expenditures', have decreased and increased respectively, see figure 8.

In 2015 poverty dropped by 40.5% to 9.4% compared to the 2012 measure. In addition, 2015 per capita expenditures have increased by 25 percent to 4.7 USD. The Nanumba North population calculated to be living under the \$1.25/day, per person poverty line is 15,549 persons. This district level

progress is interestingly accompanied by a relatively low USAID presence score of 0.6, with the highest score possible being 4. This score signifies characteristics of a **YELLOW** district, one that is progressing well with relatively few USAID resources. That said, the presence of other development partner and GOG intervention have not been taken into account.

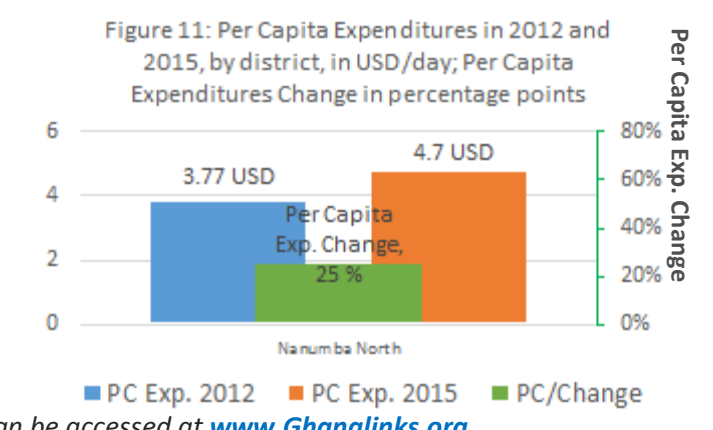
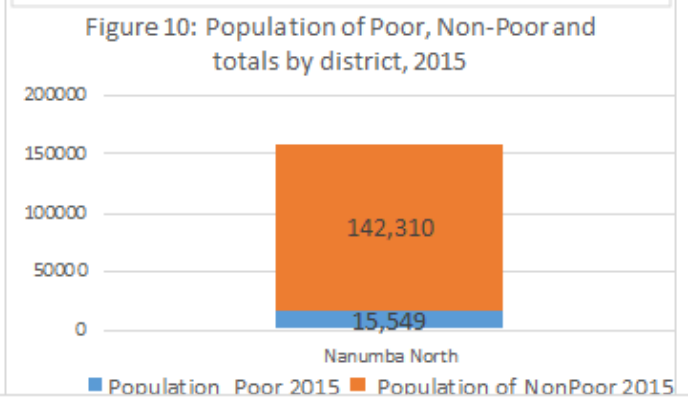
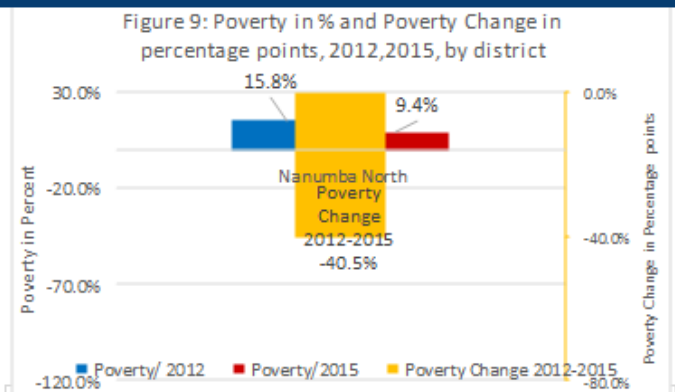
The presence calculation is provisional and only includes the number of direct beneficiaries and Agricultural Rural loans. The final calculation will include "area under improved technology", as well as updated direct beneficiaries numbers with 2015/2016 data. Once the data is updated Nanumba North will likely become a **GREEN** district indicating strong district progress accompanied by significant USAID presence.

USAID District Presence Score

- NO USAID DISTRICT PRESENCE
- LOW USAID DISTRICT PRESENCE
- BELOW AVERAGE USAID DISTRICT PRESENCE
- AVERAGE USAID DISTRICT PRESENCE
- ABOVE AVERAGE USAID DISTRICT PRESENCE
- HIGH USAID DISTRICT PRESENCE

USAID District Presence Vs. Impact Flag

- BELOW AVERAGE USAID DISTRICT PRESENCE AND CONTRADICTIONING IMPACT INDICATORS
- ABOVE AVERAGE USAID DISTRICT PRESENCE AND CONTRADICTIONING IMPACT INDICATORS
- BELOW AVERAGE USAID DISTRICT PRESENCE AND REGRESSING IMPACT INDICATORS
- ABOVE AVERAGE USAID DISTRICT PRESENCE AND IMPROVING IMPACT INDICATORS
- BELOW AVERAGE USAID DISTRICT PRESENCE AND IMPROVING IMPACT INDICATORS
- ABOVE AVERAGE USAID DISTRICT PRESENCE AND REGRESSING IMPACT INDICATORS

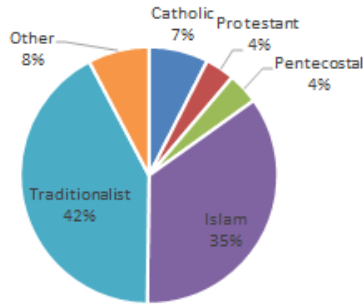




DEMOGRAPHICS & WEATHER

This section contains facts and figures related to Nanumba North demographics, religious affiliation, literacy and weather indicators

Figure 12: Religious belonging, 2010



Source: Nanumba North District Analytical Report, GSS, 2014

Figure 13: Household Composition, by groupage, 2015, in percent

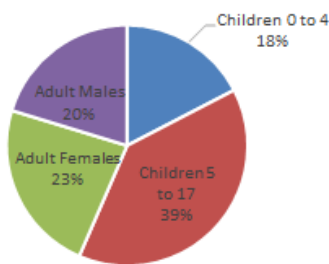
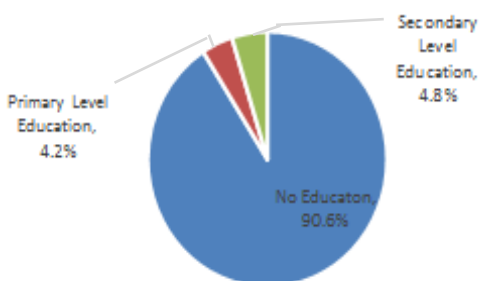


Figure 14: Education Attainment in Nanumba North, 2015



Source: Figure 13,14, PBS 2015, Kansas State University

Nanumba North has a total population of 157, 859 people, 79,816 females and 78,043 males with an average household size of 6.9 persons per household.

Nanumba North lies in the tropical continental climatic zone and experiences average annual precipitation relative to other districts in the Northern Region, see figure 15. Note that 2010 experienced significant rainfall and flooding across Northern Ghana.

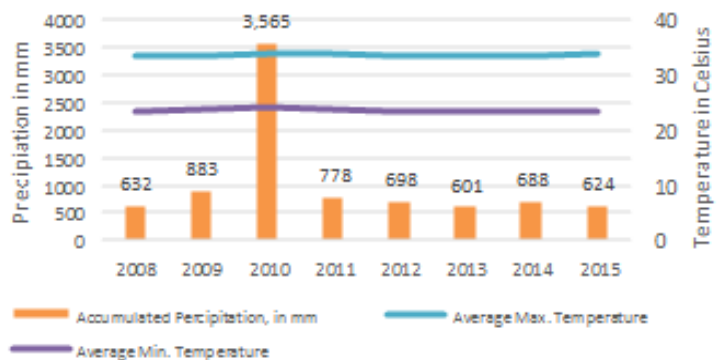
The majority of the population indicate their religious belonging to be traditionalist at 42.1%, followed by Muslim (35.1%), Christians (15.1%) and Other (7.7%) as shown in Figure 12.

The district accounts for a young population as 57% of the household members range 0 to 17 years, as figure 13 shows.

Nanumba North accounts for a very low level of adult educational attainment as shown in figure 14. A vast majority of the adults in Nanumba North, 90.6% have received no education, while only 4.2% went through primary schools and only 4.8% of the sample through secondary school.

71.2 percent of people residing in Nanumba North identify as being economically active. Only 4.4% are identify as unemployed (GSS, 2014).

Figure 15: Average Yearly Acc. Precipitation and Average Min. Max Temperatures in Celsius, 2008-2015





USAID
FROM THE AMERICAN PEOPLE

DISCUSSION QUESTIONS

This section contains discussion questions and potential research topics as a result of the data and analysis presented on Nanumba North

QUESTION I

What has contributed to the high gross margins and yields of maize for USAID direct beneficiaries, as compared to the district averages provided by MOFA and the APS, Figure 1 and 2, page 4?

QUESTION II

Why is the soybean yield of direct beneficiaries lower than the average yield reported by MOFA for all farmers in the District? (Figure 3 on page 3)

QUESTION III

Given Nanumba North's agricultural production, health and sanitation figures, as well as results from the presence vs impact matrix, what should USAID development work focus in the next two years? What future development assistance would be helpful for Nanumba North?

QUESTION IV

Why are the quantities of rice, maize and soybean produced in Nanumba North so low compared to cassava and yam? Is there a link to nutrition patterns or production related challenges? Do farmers grow more yams and cassava for economic reasons or simply because the soil and weather conditions allow it?

QUESTION V

What other agricultural or nutrition focused development partners or GoG interventions have previously been implemented, are ongoing, and/or are in the pipeline that may impact Nanumba North's development?

QUESTION VI

According to production data distributed by MOFA and our calculations, Nanumba North contributes with 0.9% of Maize, 0.4% Rice and 5.4% of Soybean to the overall Savannah Ecological Zone's (ZOI) production figures for each crop. While the production of maize does not seem to be clustered, with each district contributing a little portion, there seems to be clustering in rice production (more in Tolon Kumbungu 13.8% and Tamale 12.8%) and soybean production (Yendi 19.7%, than Savelugu 8%, Bawku 5.9%, Nanumba South 8.3% and Nanumba North amongst them (5.4%). Is something being done 1) to understand why this accumulation happens with rice and soybean but not with maize in the North 2) to promote the production clustering in specific zones or 3) work with identified production clusters in specific districts?

The Feed the Future Ghana District Profile Series is produced for the USAID Office of Economic Growth in Ghana by the Monitoring, Evaluation and Technical Support Services (METSS) Project. The METSS Project is implemented through:



The information provided is not official U.S. government information and does not represent the views or positions of the U.S. Agency for International Development or the U.S. Government.