# OFFICE OF INSPECTOR GENERAL

# RESULTS REPORTED FOR USAID/TANZANIA'S FEED THE FUTURE ACTIVITIES ARE UNRELIABLE

AUDIT REPORT NO. 4-621-16-002-P
SEPTEMBER 15, 2016
REISSUED SEPTEMBER 21, 2016

PRETORIA, SOUTH AFRICA

*Office of Inspector General*

September 21, 2016

**MEMORANDUM**

**TO:** USAID/Tanzania Acting Mission Director, Daniel Moore

**FROM:** Policy, Planning, and Analysis Director, David Thomanek /s/

**SUBJECT:** Reissuance of Results Reported for USAID/Tanzania's Feed the Future Activities Are Unreliable (Report No. 4-621-16-002-P)

This memorandum transmits our revised final report on the subject audit. The audit was revised to provide additional clarification to references made to USAID's Automated System Directives used in the report. These revisions do not affect the report's conclusions, recommendations, or the mission's management decisions thereon. The audit's objective was to determine whether USAID/Tanzania's FTF activities were improving agricultural productivity and decreasing malnutrition. In finalizing the audit report, we considered your comments on the draft report and included them in their entirety, excluding attachments, in Appendix II.

The audit report contains three recommendations to help USAID/Tanzania strengthen its Feed the Future activities. After reviewing information provided in response to the draft report, we acknowledge management decisions on all three recommendations and final action on recommendations 2 and 3. Please provide evidence of final action on the open recommendation to the Audit Performance and Compliance Division.

Thank you and your staff for the cooperation and assistance extended to us during this audit.

# CONTENTS



**Abbreviations**

The following abbreviations appear in this report:

| | |
|---|---|
| ADS | Automated Directives System |
| AOR | agreement officer's representative |
| COR | contracting officer's representative |
| FEWSNET | Famine Early Warning Systems Network |
| FTF | Feed the Future |
| FY | fiscal year |
| MBNP | Mwanzo Bora Nutrition Program |
| OIG | Office of Inspector General |
| TAPP | Tanzania Agriculture Productivity Program |

# SUMMARY OF RESULTS

In Tanzania, agriculture accounts for more than 25 percent of gross domestic product and employs approximately 75 percent of the total workforce. Yet despite agriculture's prominence and the country's abundant resources and access to international markets, many people cannot feed themselves enough nutrient-rich food. Four out of every 10 children under age 5 suffer from malnutrition, and half of women of childbearing age have anemia.[1]

To help Tanzania overcome these challenges, USAID/Tanzania launched programs valued at $660 million as part of Feed the Future (FTF), a $3.5 billion U.S. Government initiative to reduce hunger, poverty, and malnutrition. According to mission documentation, FTF in Tanzania was designed to increase agricultural productivity and ensure that underserved groups—like women and children—benefit from growth through better nutrition and improved agriculture.

The Office of Inspector General (OIG) conducted this audit to determine whether USAID/Tanzania's FTF activities were improving agricultural productivity and decreasing malnutrition. Of the mission's 27 active FTF programs, the audit focused on those shown below. We selected these four programs based on their substantial reported contributions to agricultural productivity and malnutrition, representation of the mission's range of FTF activities, alignment with the Tanzanian Government's priorities, and location. The selected activities accounted for 46 percent of the value of the mission's FTF portfolio as of September 2014.

**Selected FTF Programs[a]**

| Implementer<br>Program Name | Dates | Amounts<br>($ in millions)[b] | |
|---|---|---|---|
| **ACDI/VOCA**<br>**The NAFAKA Staples Value Chain** (NAFAKA). Designed to improve value chains—the activities required to produce and deliver a product or service to the final customer—to increase the production and profits of smallholder farmers cultivating rice and maize. *Nafaka* means "grain" in Swahili. | April 2011-April 2017 | Estimated Cost | 30.0 |
| | | Obligations | 29.7 |
| | | Accrued Expenditures | 25.1 |
| **Fintrac**<br>**The Tanzania Agriculture Productivity Program** (TAPP). Designed to promote sustainable economic growth through improved horticulture, trade, and adaptation to climate change. In November 2013, the mission changed its focus from providing management training and marketing tools to helping increase the production and incomes of smallholder farmers. | Oct. 2009-Aug. 2015 | Estimated Cost | 27.0 |
| | | Obligations | 27.0 |
| | | Accrued Expenditures | 22.2 |
| **Africare**<br>**The Mwanzo Bora Nutrition Program** (MBNP). Designed to improve the nutritional intake of children under 5 and pregnant and lactating women to combat stunting and maternal anemia. *Mwanzo bora* means "good start" in Kiswahili. | Sept. 2011-Aug. 2016 | Estimated Cost | 35.0 |
| | | Obligations | 17.7 |
| | | Accrued Expenditures | 16.9 |

[1] USAID/Tanzania's Multi-Year Strategy for fiscal years 2011 to 2015.

| Implementer<br>Program Name | Dates | Amounts ($ in millions)[b] | |
|---|---|---|---|
| **CDM International, Tanzanian Government: Advance Works and Irrigation and Drainage Infrastructure for the Dakawa Irrigation Scheme Under the Irrigation and Rural Roads Infrastructure Project.** Designed to repair two boundary drains and flood protection embankments, and to construct the project manager's office and repair an access road. Project goals include increased agricultural productivity, irrigated farmland, and access to markets among other activities; the project is among the Tanzanian Government's priorities. | Aug. 2014-Feb. 2017 | Estimated Cost | 10.2 |
| | | Obligations | 10.2 |
| | | Accrued Expenditures | - |

[a] NAFAKA and TAPP are contracts, MBNP is a cooperative agreement, and the infrastructure project is carried out under fixed-amount reimbursement implementation letters.

[b] The estimated cost for programs is as of September 2014; obligations and accrued expenditures, except those under the infrastructure project, are as of March 2015.

The implementers reported the following results.

- **NAFAKA.** As of September 30, 2014, the program reported that 81,063 farmers increased their crop yields with new technologies and modern farming methods, and more than 300 farmers got loans worth nearly $900,000 to expand their farming business.

- **TAPP.** In its report for the quarter ended September 2014, Fintrac reported that TAPP had assisted more than 37,700 rural households with information about improved seed varieties and hybrids, land preparation and plant spacing, plant trellising (raising and supporting plants off the ground), drip irrigation systems built using low-cost inputs and methods, and preventive integrated pest management. Fintrac also reported training 114,797 farmers in business and marketing skills, nutrition, improved technologies, and farm management.

- **MBNP.** According to Africare, MBNP collaborated with regional and district authorities and civil society organizations to improve the nutrition of children and of pregnant and lactating women. As of September 30, 2014, MBNP reportedly had trained 14,145 agricultural professionals and community volunteers—including 1,340 health workers from 826 health facilities—to teach people how to grow, raise, cook, and eat more nutritious food. In addition, in 2,045 villages, MBNP reported distributing 2,382 kits for measuring the consumption of essential nutrients such as iron and folic acid.

- **Infrastructure Project.** As of March 31, 2015, no irrigation projects had been rehabilitated or constructed.

We also noted productivity improvements on demonstration farms we visited, as shown in the following photos.

 

**This TAPP-funded demonstration plot in Kiboje, Zanzibar, shows sparse pineapple growth at left, where farmers used traditional methods, and lush vegetation at right, where farmers applied improved technologies. (Photo by OIG, March 2015)**

**TAPP-assisted farmers harvest tomatoes at Fikra Zetu Farm in Zanzibar, where they said production increased fivefold. (Photo by OIG, March 2015)**

Nevertheless, data problems prevented us from substantiating progress on agricultural productivity and nutrition:

- Mission did not verify agricultural productivity data (page 5). Farmers reported prices for the food staples they sold that were inconsistent with those received by other agricultural groups, contained errors, and differed significantly from market values.

- The mission did not clarify nutrition indicators to ensure valid results (page 7). Africare reported that because of its efforts 1,273,205 children received essential nutrition services and 812,202 children received vitamin A in program-supported health facilities. However, Africare worked only with adults.

Furthermore, the infrastructure project was delayed:

- The mission completed no irrigation projects (page 8). The Irrigation and Rural Roads Infrastructure Project was to construct and rehabilitate several irrigation schemes to bring water to some 47,000 hectares (approximately 116,000 acres) of farmland. However, as of March 31, 2015, no irrigation projects had been rehabilitated or constructed.

We made these additional observations:

- Performance targets were not ambitious (page 9). Results on several performance indicators were therefore several times higher than their targets.

- Mission officials did not regularly document site visits (page 9). Of the five FTF agreement officer's representatives and contracting officer's representatives (AOR/COR) we interviewed, only one documented site visits—one in February and the other in April of 2013.

To help USAID/Tanzania improve performance results, we recommend that the mission take the following actions:

1. Implement a plan to validate beneficiaries' survey-based, self-reported data (page 7).

2. Revise its FTF performance indicators on distributing vitamin A to children under 5, on providing essential nutrition services, and on reaching women of reproductive age so that they accurately represent outputs (page 8).

3. Establish a site visit policy that includes standards for frequency and documentation (page 10).

Detailed findings appear in the following section. Appendix I contains information on the scope and methodology. OIG's evaluation of management comments appears on page 11, and the full text of management comments appears in appendix II.

# AUDIT FINDINGS

## Mission Did Not Verify Agricultural Productivity Data

USAID policy[2] makes clear that data for performance monitoring, decision making, and reporting should meet quality standards. To ensure quality, those collecting data should have controls to reduce recording errors and data manipulation.

According to the FTF Indicator Handbook, USAID missions implementing agricultural programs are required to use gross margin as an indicator. Gross margin is the amount of money left after subtracting variable production costs from the sales price. The indicator is required because it measures increased agricultural gross domestic product, increased income, “and thus directly contributes to the intermediate result of improving production and FTF’s goal of reducing poverty.” It requires implementers to survey farmers about sales and variable production costs. Although the U.S. Department of Agriculture recognizes this method for direct costing, it acknowledges the method is effective only if farmers can accurately recall what their commodity-specific costs were or maintain commodity-specific records.

Auditors noted the following problems, which decreased the probability that the mission reported reliable gross margin data.

**NAFAKA.** NAFAKA’s results were inconsistent with those of other groups.

- **Rice.** NAFAKA surveyed 959 beneficiaries out of 104,781 throughout Tanzania to obtain gross margin data and reported a gross margin per hectare of $682 for rice for fiscal year (FY) 2014. The annual target had been $595.

  The reported amount differed from what the Rice Council of Tanzania reported.[3] The council’s traditional smallholder farmers in the Kilombero Valley realized average gross losses of $629 per hectare between 2013 and 2014. The council attributed these losses to the suspension of a 75 percent tariff on imported Asian rice. Without the tariff, rice became cheap, leaving domestic rice producers unable to compete, according to the council. A March 2016 report published by the Center for Strategic and International Studies Global Food Security Project corroborates this decline in locally produced rice prices in Tanzania due to duty-free imports.[4]

  Mission officials said the gross margins for both NAFAKA and the Rice Council were reliable, although the deviations make that doubtful.

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[2] Automated Directives System (ADS) 203.3.11.1, “Data Quality Standards,” November 2, 2012. Note: Effective September 7, 2016, USAID replaced ADS chapter 203 with revised chapters 200 and 201. However, ADS 203 was in effect during the audit.
[3] The Rice Council of Tanzania is a partner organization under a USAID/Tanzania-funded policy program.
[4] Kimberly Flowers and Onesmo Shuma, “Tracking Promises: Analyzing the Impact of Feed the Future Investments in Tanzania,” March 2016.

NAFAKA's reported wholesale prices for rice also were significantly greater than the retail market values reported by the Famine Early Warning Systems Network (FEWSNET) Price Watch.[5] NAFAKA's average wholesale price during fiscal year 2014 for paddy (unprocessed) rice based on survey data was $1.80 per kilogram, but the August 2014 retail market value per FEWSNET for milled rice in Dar es Salaam was only $0.85 per kilogram. Other regions reported retail rice prices as low as $0.76 per kilogram. However, wholesale rice prices are generally not more than twice the value of retail prices.[6] Hence, NAFAKA's reported gross margin for rice of $682 seems to be significantly overstated.

- **Maize.** NAFAKA reported that its maize farmers realized an average wholesale price of $0.77 per kilogram during FY 2014. However, the retail market price FEWSNET reported for maize in Dar es Salaam in August 2014 was only $0.40 cents per kilogram. Farmers in other regions of Tanzania reported maize prices of $0.24 cents per kilogram.

**TAPP.** TAPP data also had errors. The audit reviewed 2,084 responses to a TAPP survey on sales and found 53 duplicated transactions and 56 erroneous transactions. The following are examples of errors, expressed in dollars:

- Two sales by the same tomato farmer on March 30, 2014, were recorded at vastly different prices—equivalent to $0.94 and $0.44 per kilogram.

- Two sales by the same cabbage farmer on March 10, 2014, were recorded at $0.03 and $2.51 per kilogram.

- A sale of 4,000 kilograms of Irish potatoes on June 17, 2014, was recorded at $0.00.

According to implementer staff, the 53 duplicates resulted from a bug in the data collection software, but staff did not find the duplicates or question price fluctuations as unusual when analyzing the data. They said they would do a more thorough review in the future but felt confident about the integrity of the data.

These discrepancies stem from the mission's reliance on self-reported data—an issue also raised in a March-May 2013 report on data quality that the mission commissioned.[7] The report questioned whether beneficiaries were "prepared and equipped to manage that task [i.e., report data] with proficiency and accuracy" and recommended that implementing staff collect data in other ways. NAFAKA officials said they had implemented all the report recommendations, yet NAFAKA still uses surveys to collect sales data.

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[5] The Famine Early Warning Systems Network is a USAID-funded activity. It monitors trends in staple food prices in countries prone to food insecurity, receiving price data from partner organizations such as the Regional Agricultural Intelligence Network, the Food and Agriculture Organization of the United Nations, the World Food Programme, and others.

[6] RIG/Pretoria determined that NAFAKA's average price for rice was $1.80 per kilogram by reversing NAFAKA's gross margin calculation of $682, as explained in our evaluation of management comments on page 11. In their management comments (page 17), mission officials acknowledged that NAFAKA rice farmers were only receiving $0.35 per kilogram and that retail prices normally exceed wholesale prices.

[7] The Mitchell Group prepared "Report of Data Quality Assessment: Tanzania Staples Value Chain Activity (NAFAKA)," May 2013.

In relying on beneficiaries' records, the mission and the implementers are following the FTF handbook, which says the information used to calculate gross margin can be collected through surveys. Although the handbook suggests using farm or accounting records as source data, it does not require doing so.

An official from USAID's Bureau of Food Security in Washington explained the reliance on surveys. She said the only farmers who keep detailed accounting records are members of cooperatives and producer organizations, who have higher rates of literacy and would bias the sample. She said surveys of individual farmers are more representative of the beneficiary population.

Since the FTF handbook stresses the importance of gross margin data—"Improving the gross margin for farm commodities for small-holders contributes to increasing agricultural [Gross Domestic Product], will increase income, and thus directly contribute to . . . improving production and . . . reducing poverty"—they need to be reliable. Moreover, making sure farmers understand and monitor gross margins can help them avoid losing money on sales and stay in business. Accordingly, we make the following recommendation.

> ***Recommendation 1.*** *We recommend that USAID/Tanzania implement a plan to validate beneficiaries' survey-based, self-reported data.*

## Mission Did Not Clarify Nutrition Indicators To Ensure Valid Results

According to the *Tanzania Demographic and Health Survey*, *2010,*[8] 42 percent of the country's children under 5 were stunted (their growth and development were delayed), and 53 percent of pregnant women were anemic. In support of the Tanzanian Government's efforts to address these measures, Africare designed its program activities to improve the nutritional status of children and of pregnant and lactating women.

However, the mission did not, in accordance with Agency policy, ensure that performance data were valid.[9] It accepted Africare's reported results, which were not clearly linked to MBNP activities. Examples follow.

- **Providing essential nutrition services directly to children.** Africare's October 2014 annual report on MBNP said it had provided 1,273,205 children under 5 with essential nutrition services. In fact, MBNP's activities involved training health workers at government health facilities to share nutrition information with pregnant women and lactating mothers so they, in turn, would use it to improve their children's nutrition. At best, these activities improved mothers' knowledge of nutrition, but the program did not measure knowledge and cannot demonstrate any improvement.

- **Providing vitamin A directly to children.** Africare also reported providing 812,202 children under 5 with vitamin A in MBNP-supported health facilities, when what it really did was

[8] A joint publication by Tanzania's National Bureau of Statistics and the U.S.-based company ICF Macro with funding from USAID, April 2011 (http://dhsprogram.com/pubs/pdf/FR243/FR243[24June2011].pdf).
[9] ADS 203.3.11.1. Effective September 7, 2016, USAID replaced ADS chapter 203 with revised chapters 200 and 201. However, ADS 203 was in effect during the audit.

increase beneficiaries' awareness of the importance of vitamin A. The 812,202 reported was the number of vitamin A samples given out by government health facilities. Africare has not demonstrated a clear link between MBNP activities and the number of doses distributed. Although MBNP likely increased demand for vitamins, no one knows by how much. Mission correspondence showed that the Tanzanian Government had raised this concern and pressed USAID to stop using this indicator.

Mission officials did not recognize that Africare's reported outcomes mischaracterized its work because officials did not implement the recommendations from the April 2013 data quality report: They did not clarify how to collect data on indicators like the ones detailed above, even after the Tanzanian Government raised concerns—for example, with the indicator *Number of children that received vitamin A in MBNP-supported clinics*.

Lack of precise performance indicators and misleading program results could lead to erroneous conclusions about whether FTF is reducing maternal anemia and childhood stunting. Therefore, we make the following recommendation.

> ***Recommendation 2.*** *We recommend that USAID/Tanzania revise its Feed the Future performance indicators on distributing vitamin A to children under 5, on providing essential nutrition services, and on reaching women of reproductive age so that they portray outputs attained accurately.*

## Mission Completed No Irrigation Projects

The Irrigation and Rural Roads Infrastructure Project was designed to improve irrigation for 47,000 hectares (approximately 116,000 acres) of farmland. However, none of the planned irrigation projects, including the 2,000-hectare (approximately 4,940-acre) Dakawa Irrigation Scheme, had been started.

Mission officials responsible for the project gave several reasons for the lack of results and explained why the target of 47,000 was not feasible.

- Current mission officials said they thought their predecessors had developed the target of 47,000 based on incorrect government assumptions about the feasibility of the scheme and its environmental consequences. When staff of CDM International, the contractor for the Dakawa Irrigation Scheme, began conducting their own feasibility and environmental impact assessments, they found that such assumptions were in error.

- Removing the amount of water needed to irrigate 47,000 hectares (approximately 116,000 acres) would have drained the local river and left villagers unable to meet their basic needs. CDM recommended the mission not proceed with the Dakawa Irrigation Scheme.

- The target assumed that several pumping stations in the region could be repaired. However, routine maintenance had not been performed on some in more than 30 years, and CDM found they would need to be completely replaced.

- Land for the irrigation infrastructure was unresolved. Compensation agreements with farmers on whose land irrigation infrastructure might be built would need to be completed before the scheme could begin.

Because the mission did not complete the planned irrigation projects, its other FTF activities were likely less effective than they could have been. A World Bank assessment done in 2010 in Tanzania showed that development and irrigation of 46,000 hectares (approximately 113,668 acres) of rice fields could increase yields from 1.9 to 4.5 tons per hectare and average gross income per hectare from $941 to $2,258 per year. Still, by not moving forward as planned, the mission avoided causing devastating environmental consequences.

Cost-benefit and soil analyses were under way at the time of audit fieldwork. When mission officials know the results of these studies, they will formulate a new, more modest target. They already set a provisional target of 3,000 hectares (approximately 7,410 acres) and expected work to be completed within 18 months. For these reasons, we are not making a recommendation.

## Performance Targets Were Not Ambitious

Although USAID guidance requires program teams to set ambitious yet realistic targets that can be achieved on budget during the implementation period, it also notes that missions might need to change or adjust performance indicators to react to shifting priorities or lessons emerging from implementation or evaluations.[10]

The mission did not adjust TAPP's performance targets, even though implementation data showed they were not ambitious. TAPP had 24 indicators to measure increases in productivity, investment, and local capacity and steps to protect the environment. Data on 15 of them exceeded the targets in 2014—in 13 cases equaling 147 percent or more of the target value. For example, the *Number of rural households benefitting directly from U.S. Government interventions* reached 440 percent of its target, and the *Number of hectares of land under improved technologies or management practices as a result of U.S. Government assistance* reached 462 percent of its target. Appendix III contains a list of 13 TAPP indicators that had results of between 147 percent and 1,483 percent of their targets.

The mission's FTF program manager said mission officials intended to revise the targets but had not found time because of other priorities.

By not reviewing and adjusting output targets, mission staff, implementers, and other stakeholders do not have appropriate benchmarks to measure progress toward FTF goals or take corrective action as needed. However, because TAPP ended in August 2015, we are not making a recommendation.

## Mission Did Not Regularly Document Site Visits

To verify program activities, AORs should perform site visits, as necessary and must write a summary of findings to include in the award file.[11] Similarly, CORs should perform and document site visits.[12]

[10] ADS 203.3.9, "Setting Performance Baselines and Targets," November 2, 2012; ADS 203.3.10, "Changing Performance Indicators," November 2, 2012. Effective September 7, 2016, USAID replaced ADS chapter 203 with revised chapters 200 and 201. However, ADS 203 was in effect during the audit.
[11] ADS 303.3.18.b, "Award Administration: Site Visits," December 26, 2014.

However, FTF AORs and CORs were not documenting regular site visits to monitor program activities. While these officials said they were doing site visits, only one person documented visits—two of them, in February and April 2013.

A USAID/Tanzania official gave this explanation:

> It was not a common practice at this mission to complete written trip reports. COR/AORs after conducting field visits would meet with [chiefs of party] and other implementing staff to discuss what was seen and any issues that were identified. This is now changing as we are requiring all future field visits to be documented and are developing a common trip report template. COR/AORs do conduct field visits and the frequency will be increasing in the coming months as new staff are brought on to help manage the activities. In general, staff tries to spend 25 percent of their time in the field and/or meeting with implementing partners and other counterparts.

Monitoring program activities and evaluating results are essential to development activities. Without documentation to support performance monitoring and evaluation, it becomes difficult to ensure that implementers are progressing toward program goals and complying with their awards and other rules and regulations. Therefore, we make the following recommendation.

***Recommendation 3.*** *We recommend that USAID/Tanzania establish a site visit policy that includes standards for frequency and documentation.*

[12] ADS 202.3.8.2, "Role of USAID Missions and their Development Objective Teams in Making Payment," September 1, 2008.

# EVALUATION OF MANAGEMENT COMMENTS

In its comments on the draft report, USAID/Tanzania did not agree with all the findings but agreed in principle with all the recommendations. The mission made management decisions on all three recommendations and took final action on recommendations 2 and 3. Our evaluation of management comments follows.

**Finding 1.** The mission objected strongly to what it considered “an inaccurate reflection and a misleading characterization” of FTF reported data. The mission had four criticisms of our analysis. Below we present and rebut them.

- First, it implied that higher results from NAFAKA are to be expected because the activity was implemented mainly with farmers who rely on an implementation method known as System for Rice Intensification, associated with higher yields. However, the Rice Council’s gross margin data specific to farmers using that method show a loss of $570 per hectare.

- Second, the mission pointed out that NAFAKA activities covered an area smaller than the national scope covered by the Rice Council. However, the Rice Council’s data we cited were not national, but were limited to the Kilombero Valley, which is within NAFAKA’s implementation area. According to NAFAKA’s data, Kilombero farmers realized a gross margin of $655 per hectare, whereas the Rice Council (whose data we cited) reported that traditional farmers lost $629 per hectare.

- Third, the mission noted that collecting data using beneficiary surveys is the recommended approach. We agree that it is approved and commonly used but disagree that it is sound. The main point of our finding is that self-reported data are subject to bias and inherently less reliable than verified data. We are pleased that the mission found value in the recommendation to validate these data.

- Fourth, the mission noted that NAFAKA’s average price for paddy rice was $0.346 per kilogram, not $1.80 per kilogram, as we stated.

  Yet we derived $1.80 per kilogram using the gross margin per hectare that NAFAKA reported—$682—and the values it reported for (1) gross sales, (2) cost of sales, and (3) total hectares planted for FY 2014 (proceeding top to bottom in the middle column below):

| Item | Amount NAFAKA Reported Based on Surveys | Amount Mission Acknowledged in Comments |
|---|---|---|
| *Gross sales* | $36,838,565 | $7,174,417 |
| *Less cost of sales* | 13,595,738 | 13,595,738 |
| *Gross margin (loss) on sales* | 23,242,827 / | ($6,421,321) |
| *Total hectares planted* | 34,079 | 34,079 |
| *Gross margin (loss) per hectare* | **$682** | ($188) |
| *Kilos of rice sold* | 20,498,334 | 20,498,334 |
| *Average price per kilo of rice* | $1.80 | **$0.35** |

For NAFAKA farmers to realize a gross margin on sales of $682 per hectare, they would have had to sell rice at $1.80 per kilogram at wholesale. However, as we noted in the report, this price was more than twice the retail value of rice during August of 2014 ($0.85 in Dar es Salam).

The mission acknowledged that NAFAKA farmers' average wholesale price for rice during FY 2014 was only $0.35 per kilogram. Therefore, these farmers could not have realized a gross margin of $682. As shown in the third table column, multiplying $0.35 by 20,498,334 kilograms sold comes to only $7,174,417. Subtracting cost of sales of $13,595,738 comes to a gross loss of $6,421,321. Dividing this figure by 34,079 hectares comes to a loss of $188 per hectare. That figure is more consistent with the Rice Council's reported gross loss of $629 per hectare during roughly the same reporting period.

**Recommendation 1.** The mission agreed to devise a process for validating a subset of the survey data and gave a revised target completion date of December 31, 2016. We acknowledge the mission's management decision.

**Recommendation 2.** The mission agreed to revise one of its FTF performance indicators to better reflect outputs. The mission reported working with Africare and the Bureau of Food Security to revise the indicator on providing vitamin A directly to children as follows:

> Original: *The number of children under five years of age who received Vitamin A through USG-supported programs.*
>
> Revision: *The number of children under five years of age who received Vitamin A as a result of USG-supported nutrition campaigns and outreach programs.*

The mission provided us with a copy of Africare's revised performance monitoring plan, which contains the revised wording.

The mission planned to keep the two standard indicators on providing essential nutrition services and on reaching women of reproductive age as they are since, in the mission's view, improving women's knowledge of good nutrition does "positively affect the wellbeing of their . . . children."

We acknowledge the mission's management decision and final action.

**Recommendation 3.** The mission agreed to establish a site visit policy that specifies frequency and documentation standards. On September 25, 2015, the mission issued an order on performance monitoring, which we reviewed and found responsive. Accordingly, we acknowledge the mission's management decision and final action.

# SCOPE AND METHODOLOGY

## Scope

OIG conducted this performance audit in accordance with generally accepted government auditing standards. They require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions in accordance with our audit objective. We believe that the evidence obtained provides that reasonable basis.

We limited our scope to four FTF activities: NAFAKA, TAPP, MBNP, and select implementation letters under the Irrigation and Rural Roads Infrastructure Project. These activities were selected based on their reported contributions to agricultural productivity and malnutrition, representation of the mission’s range of FTF activities, alignment with the Tanzanian Government’s priorities, and location. As of September 30, 2014, these activities accounted for 46 percent of the total estimated cost of the mission’s 27 active FTF awards. As of March 2015, USAID/Tanzania had obligated $75.6 million and expended $64.2 million for the four activities.

The purpose of this audit was to determine whether USAID/Tanzania's FTF activities were improving agricultural productivity and decreasing malnutrition in Tanzania. To understand these activities, we reviewed the mission's pipeline report as of September 30, 2014; the mission's country development cooperation strategy for FYs 2015 to 2019; the U.S. Government’s FTF Tanzania multiyear strategy for FYs 2011 to 2015; and the mission’s planned indicators.

We performed fieldwork from March 9 to 27, 2015. We conducted our audit at the USAID mission in Dar es Salaam and at partner offices in Zanzibar and the Morogoro Region of Tanzania. We also corresponded with FTF officials from USAID’s Bureau of Food Security in Washington, DC. The audit work covered the period from October 2009 to March 2015 and assessed results reported for October 1, 2012, to September 30, 2014.

In planning and performing the audit, we assessed the significant controls that USAID/Tanzania used to manage program activities. This included review of the activity approval action memo, annual work plans, and quarterly reports. We also performed site visits of selected program activities in Zanzibar and the regions of Morogoro and Dodoma. In addition, we examined data quality assessment reports for selected programs and reviewed the mission’s self-assessments of internal control for FYs 2013 and 2014, required by the Federal Managers Financial Integrity Act.[13]

We considered previous audit findings affecting the scope, including those contained in the following reports:

- The U.S. Government Accountability Office’s *Global Food Security: USAID Is Improving Coordination but Needs to Require Systematic Assessments of Country-Level Risks*, Report No. GAO-13-809, September 2013.

[13] Public Law 97-255, as codified in 31 U.S. Code 1105, 1113, and 3512.

- OIG's *Audit of Feed the Future Activities in Ethiopia*, Report No. 4-663-13-005-P, March 1, 2013.
- The Defense Contract Audit Agency's FY 2005 Incurred Cost Audit Report of Fintrac, Report No. 6431-2005B10100011, March 29, 2013.
- Africare's Financial and Federal Award Compliance Examination, Audit Report for the year ended June 30, 2013.
- ACDI/VOCA's Office of Management and Budget A-133 Supplementary Financial Report for the year ended December 31, 2012.

## Methodology

To understand the activities implemented under the four programs, we reviewed the award documents, modifications, and the mission's pipeline report as of September 30, 2014. We also reviewed work plans, quarterly and annual reports, the mission's country assistance strategy, the country development cooperation strategy, the activity approval action memorandum, and the approval for use of partner-country systems related to the Dakawa Irrigation Scheme. We also met with and interviewed mission officials and implementers.

To validate reported results, we judgmentally selected 18 program activity sites from a total of 1,057 locations to visit in the Morogoro, Dodoma, and Zanzibar Regions. The sample selection was based on significance, materiality, location, and the mission's recommendations. We visited farms and demonstration plots and interviewed mission officials, implementers, and program beneficiaries. We tested six selected FTF performance indicators: (1) *Gross margin per hectare, (2) Yield per hectare, (3) Rural households benefitting from FTF, (4) Districts with plans and budgets that include at least three essential nutrition actions, (5) Women of reproductive age reached,* and *(6) Hectares under irrigation.* We judgmentally selected these 6 from 53 FTF performance indicators based on significance and materiality and traced them to the implementing partners' supporting documents.

To answer the audit objective, we checked for documentation of results on the six selected performance indicators. which appeared in annual performance reports. We compared those results with what the implementers planned to achieve in the annual work plans. We reviewed the computer-processed data contained in the FTF Monitoring System maintained by USAID's Bureau for Food Security and TAPP's gross margin analysis tracker. Our review of system controls over data collection and entry, and the results of our data tests, showed an error rate that casts doubt on the data's validity. However, we were able to corroborate these data with other available evidence, and we believe the opinions, conclusions, and recommendations in the report are valid.

The audit used benchmarking and analytical procedures to determine commodity gross margin. We compared commodity sales price data with information from USAID's Famine Early Warning Systems Price Watch (September 2014). We also compared commodity gross margin data with information in the Rice Council of Tanzania's published reports for the years 2013 and 2014. We analyzed sales and production costs of smallholder rice farmers and compared them with those published by the Rice Council of Tanzania by converting the Rice Council's sales from Tanzanian shillings per acre to U.S. dollars per hectare. We also recalculated gross margins per hectare of smallholder farmers using benchmark market prices. We converted reported sales of rice and maize to kilograms and U.S. dollars so that we could make appropriate comparisons.

Because we judgmentally selected activities and sites for testing, the results and conclusions related to the analysis were limited to the items and areas tested and cannot be projected to all FTF activities and sites. We believe our substantive testing was sufficient to support the audit findings.

# MANAGEMENT COMMENTS

**MEMORANDUM**

Date: May 25, 2016

To: Sarah E. Dreyer
Regional Inspector General/Pretoria

From: Daniel Moore
Acting Mission Director USAID/Tanzania

Subject: Management Comments on the Audit of USAID/Tanzania's Feed the Future Activities

Reference: Draft Report No 4-621-16-XXX-P

The USAID/Tanzania mission would like to thank the RIG/Pretoria audit team for undertaking the audit of the USAID/Tanzania's Feed the Future (FTF) Activities. This memorandum contains USAID/Tanzania's response to the draft audit report. While USAID/Tanzania does not fully agree with the all of the audit findings, the Mission believes that the recommended actions will further strengthen the activities under this award.

**Audit Finding: "Self-Reported Data Were Not Reliable"**

The Mission does not agree with the characterization of the activity in the first bullet on page 3 or the finding beginning on page 5 of the draft audit report, "Self-reported data were not reliable (page 5). Beneficiary-reported data were inconsistent with those of other agricultural groups, contained errors, and differed significantly from market values." Based on the discussion below and as discussed in detail with the auditors during the audit, the Mission believes this audit finding to be an inaccurate reflection and a misleading characterization of the data reported under the FTF efforts and suggests the finding be corrected or removed.

The Mission is disappointed the auditors did not provide a fair and balanced depiction of the data sources used in the auditors analysis nor did the auditors present the Mission's rationale for using both data sets. During the audit, the Mission provided the auditors with detailed explanations of the differences in the purpose, methodology, and appropriate uses of the two sets of data the auditors were attempting to compare. Mission officials also discussed the fundamental flaws in the auditors' basic analysis of the data, as well as the conclusions which resulted from this analysis. Instead of presenting the Mission's rationale and explanation in the report, the RIG/Pretoria erroneously reports "Mission officials dismissed these variances, saying both sets of numbers were reliable." This statement could not be more incorrect.

The auditors noted the following problems, which they purported decreased the probability that the Mission reported reliable gross margin (profitability analysis) data. It was surmised that results from the FTF Staples value chain activity NAFAKA were inconsistent with those of other groups. NAFAKA surveyed 959 beneficiaries out of 104,781 within our zone of influence to obtain gross margin data and reported a gross margin per hectare of $682 for rice for FY 2014. The annual target had been $595. In contrast, data from the Rice Council of Tanzania (RCT) was used as a comparison in that RCT reported that its traditional smallholder farmers realized gross losses, on average of $629 per hectare between 2013 and 2014. RCT attributed these losses to the suspension of a 75 percent tariff on imported Asian rice. Without the tariff, the imported rice became cheap and demand for it rose, sending domestic rice prices tumbling, according to RCT. Certainly, the suspension of tariff had adverse effects on rice producer's profitability overall and that NAFAKA beneficiaries would have realized higher margins if the decision to suspend tariff was not implemented. However, there are important considerations to factor into this analysis, such as the purpose, methodology and use of data, and why the Mission feels that NAFAKA's data sets were appropriate.

Firstly, there is the need to understand the contextual factors around the location of sampling done by both entities NAFAKA and RCT. NAFAKA carries out its implementation of systems of rice intensification primarily in the SAGCOT area within the region of Morogoro, and to a limited degree on Zanzibar. In the majority of all the areas and districts in which NAFAKA operates, smallholders produce on irrigated paddy rice, although there are a few targeted areas that are rain-fed but receive reliable rainfall. As such, this region has the highest potentials for yields and explains why, to a degree, the NAFAKA data set and actuals are different compared to RCT. In contrast, RCT surveys on price and yield data from across the country which includes regions where smallholders employ upland, rain-fed rice practices, and often face unreliable rainfall patterns that have a direct effect on yields. These weather variations and rice practices play a key role in yield and price variations, to which FTF samples would have been higher given propensity for improved climatic conditions than those from primarily rain-fed areas; thus, sampling would result in differences in terms of production, varietal used, and cropping patterns.

Secondly, there are distinct differences in sampling scope. NAFAKA employs self-reported annual outcome surveys to measure gross margins data specifically within the Mission's ZOI. As mentioned above, RCT sampling is conducted across the entire country.

Thirdly, the data collection methodology used by NAFAKA is sound, as is that of RCT. For NAFAKA, self-reported sample surveys began in the second year of implementation. For FTF, it is considered the most practical and cost effective approach for collecting information on targeted FTF outcome indicators, such as those used to determine yield per hectare and incremental sales on value and volumes—data points used to calculate gross margins. NAFAKA has adopted a sample survey approach so that a representative group of smallholder farmers can be thoroughly sampled in order to extrapolate findings of the entire pool of 130,000+ beneficiaries. Again, this is considered a recommended approach by USAID's Bureau for Food Security and is used by other FTF Implementing Partners.

To gather critical data for reporting against zonal-wide outcomes, NAFAKA's Annual Outcome Survey (AOS) is conducted around the months of August/September of each growing season. This is the time when farmers harvest their crops. The price of paddy rice (and with maize) is normally at its lowest at the start of harvesting. However, NAFAKA understands that most smallholders store part of their produce in anticipation of higher prices in later months. In view of this, NAFAKA normally conducts a follow-up survey to capture the differences in prices that the AOS would have missed in August/September. This follow-up market survey happens in February of each calendar year (about 5 months after harvest), which means that price information is collected at two different points: first during the initial AOS, then again at the start of the calendar year via the follow-up market survey. Thus, for the AOS in FY 2014, in August the combined gross margin for both irrigated and rain-fed rice systems was $595. However, the follow-up market survey conducted in February 2015 illustrated more accurate gross margins and was adjusted to $682.

Finally, it should be noted that NAFAKA's average price for paddy rice was $0.346 per kilogram during the FY 2014 and not $1.8 per kilogram as incorrectly noted by the auditors. NAFAKA measured the average price for paddy rice in August 2014 and February 2015. The retail market prices for rice in Dar es Salaam which is quoted as being $0.85 per kilogram was accurate as normally "rice" sells at higher price per kg than paddy (NAFAKA data are based on paddy rice and not milled rice). As such, it is important to note some of the data discrepancies noted may have stemmed from combining data for paddy and milled rice.

Below are the specific comments with regard to the recommendations under this finding:

**Recommendation No. 1**
We recommend that USAID/Tanzania implement a plan to validate beneficiaries' survey-based, self-reported data.

Notwithstanding the inaccurate characterizations in the finding, the Mission finds value in the recommendation and agrees with the intent of the recommendation. The Mission will continue to allow NAFAKA and others to collect data from beneficiaries that are self-reporting. Again, this is considered by the Mission and BFS to be the most appropriate manner to collect data that directly relates to its target populations and geographic areas. Extrapolation of that data to a larger broader market or population base is not the intent of this data collection. Rather the intent is to show the benefits attained for those implementing USAID supported technologies under a specific activity. To address the recommendation, the Mission will work with its Monitoring and Evaluation team as well as Implementing Partners and determine an appropriate number (subset) of self-reported data/surveys to be validated by activity staff and complete the validations. The Mission will continue to follow the standard USAID Data Quality Review process for indicators as well as the existing FTF Standard Performance Indicator Reference Sheets.

Based on the above, the Mission requests RIG/Pretoria's acknowledgement that a management decision has been reached and the recommendation will be considered closed when the Mission defines an appropriate number (subset) of self-reported data/surveys to be validated (need the period) and the validation of the data/surveys takes place. The target date for completing the implementation of this recommendation is July 31, 2016.

**Audit Finding: "Nutrition Result Descriptions Were Not Precise"**

It is essential to understand the implementation process of the FTF Mwanzo Bora Nutrition Program (MBNP). As a facilitative model—as opposed to direct implementation—Africare implements through building capacity at multiple levels to reach 90 percent coverage in three regions. Africare staff alone cannot facilitate all this work. Thus, besides aggressively working with regional and district nutritionists, Africare primarily implements via Community-Based Organizations, which then work at the health facility level, using community health care workers to facilitate a cascade of trainings downward to community peer-support groups. This approach builds sustainability toward organizational outreach and subsequent behavioral change at the community level. USAID often counts beneficiaries that receive services through government health systems that would not have received the intervention without USG support.

There is no a single intervention that can address stunting and anemia adequately. A large number of studies documented internationally and locally have demonstrated that to effectively scale Social Behavior Change Communication, there needs to be a primary focus on interpersonal communication at the facility and community levels, and by engaging women and men. Africare has designed activities that include promotion of appropriate infant and young child care and feeding practices focusing under two years, consumption of diverse and balanced diet, utilization of health and nutrition care including micronutrient supplementation for pregnant and lactating women to address anemia. In addition, the program is promoting appropriate nutrition knowledge and practices at household level, and distribution of micronutrient powder to address anemia and stunting in children.

The draft report states: "Africare ended up mischaracterizing outcomes because neither it nor the mission fully implemented the recommendations from the April 2013 data quality report. They did not clarify how to collect data on indicators like the ones detailed above, even after the Tanzanian Government raised concerns—for example, with the indicator Number of children that received Vitamin A in MBNP-supported clinics," Page 8.

With respect to the indicator on providing essential nutrition services directly to children, based on global evidences, the Mission believes that wellness of the child begins from the mother's womb or even before the mother decides to become pregnant. As a result, the MBNP program focuses on improving women's knowledge of good nutrition practices believing that knowledge will be transformed into actions that positively affect the wellbeing of their born or unborn children. Improvement of nutrition status of children in the FTF zone of influence will be demonstrated after receiving the 2015 Tanzania Demographic Health Study. Availability of such results will provide USAID with opportunity to compare recent stunting and anemia statistics versus 2010 data and FTF interventions.

For the Vitamin A indicator, the auditors noted that MBNP likely increased demand for Vitamin A, which is essential for uptake. Other activities in FTF focus countries work on the demand side and report against this indicator. The essence of the activity is to act as a catalyst to service providers through training and capacity building. The service providers are the means of reaching the target population as it would be impossible for an activity to reach over 1 million beneficiaries. As a result, we must rely on the service providers to provide data on outreach and uptake. This data is then verified through the periodic collection of the larger population based surveys to demonstrate total impact. This is a limitation but does not indicate that the activity is not being successful.

The Mission agrees that reporting out on a quarterly basis on strictly output indicators may not indicate substantial achievements in terms of anemia and stunting reduction. However, a final rigorous assessment of the program will be able to provide the whole picture on how Africare has been contributing to reduction of stunting and anemia in the targeted population. Presently, Africare is testing an anemia testing protocol that the Mission hopes will help provide data evidence toward lower anemia in the ZOI due to MBNP efforts. It needs to be mentioned that access to Vitamin A supplementation by children of age 6-59 months in the three ZOI regions has improved via MBNP promotion. Reports from Regional Medical Officers show an increase of Vitamin A uptake from 98% to 102% (Manyara Region), 89% to 96.2% (Morogoro Region) and 92% to 96% (Morogoro Region), for June 2014 and December 2015 campaigns respectively.

**Recommendation No. 2**

We recommend that USAID/Tanzania revise its Feed the Future performance indicators on distributing vitamin A to children under 5, on providing essential nutrition services, and on reaching women of reproductive age so that they portray outputs attained accurately.

The Mission partially agrees with the recommendation. For reporting purposes to FTF, the Mission will keep the two standard indicators on providing essential nutrition services and on reaching women of reproductive age as is. The Mission agrees with the recommendation that the standard FTF Vitamin A indicator needs to be revised, as it does not reflect the actual work and can be misleading. The Tanzanian Government did raise this concern; not via promoting its use, only that the indicator may give the impression that Africare is actually distributing Vitamin A. Given this, the Mission has worked with Africare, under approval from the Bureau of Food Security, to revise this indicator to: "*The number of children under five years of age who received Vitamin A as a result of USG-supported nutrition campaigns and outreach programs*." This more accurately addresses increasing the awareness of the importance of Vitamin A through Community Health Workers, community leaders, sensitization meetings, PSG meetings and SBCC kit materials. Africare has revised their Performance Monitoring Plan to incorporate the revised indicator, and reporting will reflect the number of children under five years of age who received two rounds of vitamin A coverage in one year as a result of USG-supported nutrition campaigns and outreach programs. In order to minimize possibilities for double counting, data reporting for this indicator will be conducted annually. Africare has developed a new data quality assurance methodology via a Lot Quality Assurance Sampling (LQAS) surveys to rectify data concerns and validity. The Mission is confident that the LQA methodology being used by Africare will effectively verify data sets around all three output indicators.

Based on the above, the Mission requests RIG/Pretoria's acknowledgement that a management decision has been reached and that the recommendation be considered closed upon the issuance of the report. The revised Mwanza Bora Performance Monitoring Plan is attached.

**Audit Finding: "Mission Completed No Irrigation Projects"**

The audit report correctly concludes the Mission took prudent steps and decisions with respect to the evaluation and scaling back of prospective irrigation projects. For the reasons noted in the report and others, the Mission has determined due to environmental factors, it would not be prudent to implement irrigation projects on the scale envisioned in the original FTF strategy. The Mission considers this decision to be a validation of USAID policy on environmental mitigation rather than a failure to achieve. The due diligence that was conducted prior to construction was critical as it demonstrated that moving ahead with the planned efforts would have had significant negative impact on the local environment. Although it may be true that "FTF activities were likely less effective," USAID/Tanzania cannot say with any certainty that this is the case. Data from the field is demonstrating that by using other alternative methods of cultivation (i.e. Sustainable Rice Intensification) participating farmers are starting to achieve higher productivity targets and USAID is confident that it will reach our productivity goals for both maize and rice.

**Audit Finding: "Performance Targets Were Not Ambitious"**

The data analyzed by the auditors and presented in the audit report as Appendix III for TAPP is not the same as the data reported in the Feed the Future Monitoring System (FTFMS) which is used by the Mission as the basis for monitoring performance (e.g., # of rural households and # of hectares targets for FY 14). In terms of setting targets, USAID worked with TAPP in setting succinct targets for FY 2015 that corresponded to scaling out interventions. Emphasis for was placed on pivotal FTF Standard indicators (such as gross margins, both number of farmers using improved technologies/hectares under improved technologies, and the degree of smallholder and private sector investment) and thus a reasonable corresponding level of effort (LOE). It is acknowledged that a number of indicators exceeded the targets; TAPP was asked to scale out interventions, whereby targets for FY 2014 were difficult to set not fully knowing the degree of expansion. However, starting in late 2014, the Mission did encourage TAPP to begin redefining how they measured direct beneficiaries, to which they carried out via a rigorous sampling model. Previously, TAPP only counted direct as those individuals that had participated in three or more trainings. Per FTF definition, the Mission directed TAPP to conduct appropriate sample sizes to determine the extent of all those who had at least attended one training or was using an improved practice as a result of TAPP interventions. This resulted in them exceeding a number of targets, as expected by the Mission.

**Audit Finding: "Mission Did Not Regularly Document Site Visits"**

**Recommendation No. 3**
We recommend that USAID/Tanzania establish a site visit policy that includes standards for frequency and documentation**.**

The Mission agrees with this recommendation. Mission Order 205 (Performance Monitoring), dated September 25, 2015, provides guidance and sets standards for all Mission staff regarding Performance Monitoring (i.e. site visits and data quality verification).

Based on the above, the Mission requests RIG/Pretoria's acknowledgement that a management decision has been reached and the recommendation be closed.

## Indicators With Low Targets

| Indicator | FY 2014 Target | FY 2014 Actual | Percent Achieved |
|---|---|---|---|
| Number of rural households benefitting directly from U.S. Government interventions | 3,158 | 13,898 | 440 |
| Percentage change in yields of targeted products | 40 | 148 | 370 |
| Number of individuals who have received U.S. Government supported short-term agricultural sector productivity or food security training | 10,000 | 28,148 | 281 |
| Number of hectares of land under improved technologies or management practices as a result of U.S. Government assistance | 2,640 | 12,189 | 462 |
| Number of farmers and others who have applied improved technologies or management practices as a result of U.S. Government assistance | 19,500 | 28,752 | 147 |
| Number of public-private partnerships formed as a result FTF assistance | 7 | 21 | 300 |
| Number of beneficiaries with access to home and community gardens | 1,200 | 4,372 | 364 |
| Number of targeted population reached with individual and/or small group level HIV prevention interventions based on evidence and/or meet the minimum standards required | 3,000 | 16,327 | 544 |
| Number of targeted population reached with individual and/or small group level HIV prevention interventions focused on abstinence and/or being faithful, and are based on evidence and/or meet the minimum standards required | 400 | 5,933 | 1,483 |
| Number of eligible orphans and vulnerable children provided with a minimum of one core care service | 500 | 873 | 175 |
| Number of vulnerable households benefitting directly from U.S. Government assistance | 502 | 2,066 | 412 |
| Number of new value-added products introduced | 3 | 14 | 467 |
| Value of incremental sales attributed to FTF implementation | 10 | 19 | 191 |

Source: Analysis of the performance management plan indicators from TAPP’s quarterly performance report No. 20, July – September 2014.

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