

## WHAT WORKED BEST?

### REVIEW OF TITLE II BEHAVIOR CHANGE PROGRAMS IN MOZAMBIQUE

2008-2013

Commissioned by Monetization Consortium Manager, Mozambique (MONCON)



#### MYAP Organizations Reviewed:

World Vision/US (partnering with IRD)  
Save the Children (partnering with Africare & CLUSA)  
Adventist Development Relief Agency/ADRA (partnering with Samaritan Purse & ADPP)  
Food for the Hungry

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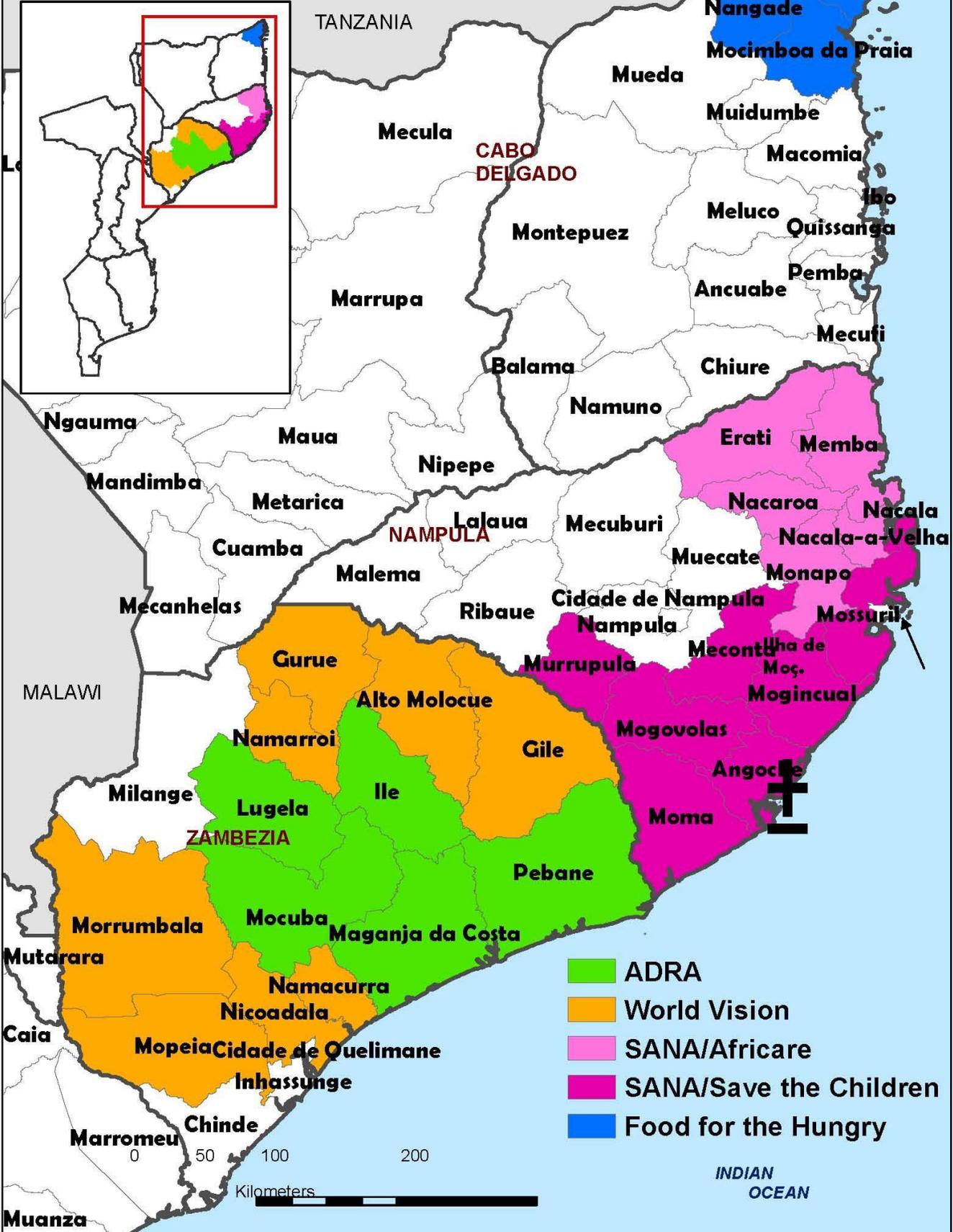
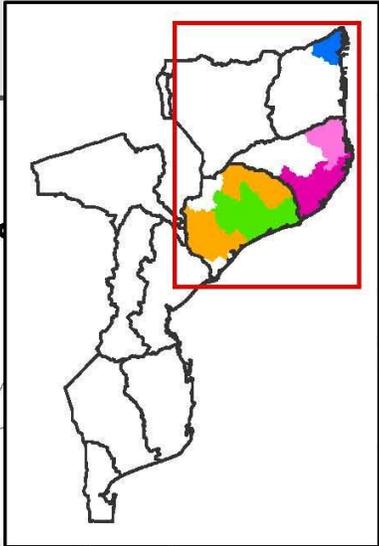
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## List of Acronyms

|                   |  |
|-------------------|--|
| ACS               | <i>Agente Comunitario de Saude</i> (SAVE Community Health Agent)   |
| ADRA              | Adventist Development and Relief Agency  |
| Agrifuturo        | A USAID funded program to promote agribusiness competitiveness in Northern Mozambique.                               |
| CHC               | Community Health Council   |
| CDC               | Community Development Committee  |
| CHA               | Community Health Agent   |
| CHV               | Community Health Volunteers  |
| CI                | Chronically Ill  |
| CLTS              | Community Led Total Sanitation   |
| DAP               | Development Assistance Program   |
| DAP               | Development Assistance Program   |
| DPAZ              | Provincial Department of agriculture of Zambezia   |
| ESOKO             | Electronic Agriculture Market Information System   |
| FA's              | Farmers Associations   |
| FAO               | Food and Agriculture Organization of the United Nations  |
| FFLG              | Farmer Field and Life Group  |
| FFP               | Office of Food for Peace   |
| FFP/W             | Office of Food for Peace-Washington  |
| FH                | Food for the Hungry  |
| FY                | Fiscal Year  |
| GMP               | Growth Monitoring and Promotion  |
| HIV               | Human Immunodeficiency Virus   |
| I.R               | Intermediate Results   |
| INGC              | <i>Instituto Nacional de Gestão de Calamidades</i> (National Institute for Emergency Response)                       |
| IPTT              | Indicator Performance Tracking Table   |
| M&E               | Monitoring and Evaluation  |
| MCHN              | Maternal Child Health and Nutrition  |
| MFG               | Mother/Father Groups   |
| MOA               | Ministry of Agriculture  |
| MOH               | Ministry of Health   |
| MT                | Metric Ton   |
| MUAC              | Middle Upper Arm Circumference   |
| MYAP              | Multi-Year Assistance Program  |
| NGO               | Non-Governmental Organization  |
| OCLUVELA          | <i>Chuabo!</i> The word that means HOPE (World Vision, Zambezia Province)  |
| OSANZAYA Zambézia | Making Zambezia Happy (language Chuabo) (ADRA, Zambezia Province)  |
| PLW               | Pregnant and Lactating Women   |
| PLWHA             | People Living with HIV/AIDS  |
| SANA              | <i>Segurança Alimentar através de Nutrição e Agricultura</i> (Food Security Through Nutrition and Agriculture), SAVE |
| SCIP              | Strengthening Communities through Integrated Programming   |
| SO                | Strategic Objective  |
| STRIVE            | Improving Children's Access to Nutritious Food: Village Savings and Loan   |
| USAID             | United States Agency for International Development   |
| VSL               | Village Savings and Loan   |

**USAID FUNDED MYAP PROGRAMS FY 2008-2013  
IMPLEMENTED BY ADRA, FH, SAVE, and WV**



## 1.0 Introduction

The three key domains below to which this consultancy is focused are certainly among the most important topics before current USAID development interventions seeking to ‘sustainably reduce global poverty and hunger’.

- (1) Interventions to improve uptake of nutrition practices
- (2) Interventions to improve uptake of agricultural practices and
- (3) Linkages between agriculture and nutrition

USAID over the past two years has initiated a new global initiative to ‘Feed the Future’ (FtF) through geographically focused and targeted interventions. The goal is to reduce the prevalence of poverty and improve the nutritional status of vulnerable people, particularly children five years and younger and their caretakers/mothers by specifically linking increased agricultural productivity and sector growth with improved nutritional status among the rural poor and their children. Yet USAID, through the Bureau of Food Security’s (BFS) Food for Peace (FFP) initiatives has been active in doing just this through its Development Assistance Programs (DAPs) and more recently the Multi-Year Assistance Programs (MYAPs). NGOs that have been the principal implementers of these programs: World Vision (WV), Catholic Relief Services (CRS), Save the Children (SAVE), Adventist Development and Relief Agency (ADRA), Food for the Hungry (FH), Africare, ACDI-VOCA, Samaritan’s Purse, and CLUSA.

Mozambique has benefited from DAP and MYAP PL 480 Title II programs over a period of fifteen years, with experienced NGO’s like World Vision, SAVE, ADRA, and FH in addressing both famine relief and development interventions targeting the most vulnerable households in the country. Each of these organizations have undertaken baseline and final evaluations of these activities over past years, and have been learning key lessons about what works and what works less well under different circumstances. Following the end of the current MYAP program cycle, and before additional interventions take place, the desire of USAID Mozambique and the MYAP partners to *“learn from their interventions over time in terms of changes among the target populations in food availability, access and utilization”* is critical and timely. The collective learning that has taken place, both positive and negative, is important not only to improve continuing and future food security program implementation efforts within Mozambique, but throughout the USAID world and current Feed the Future programs underway.

The purpose of this consultancy and review is therefore to seek to bring together the collective experience, achievements and data gained by USAID Mozambique, Government of Mozambique partners, and MYAP NGOs through these PL 480 Title II funded food security programs. Effort will be made to identify, highlight, and document the lessons learned, the best practices for achieving food security, the best practices to achieve program integration (production and nutrition interventions) and how integration can impact on better nutritional outcomes in the future. Mozambique MYAPs have clearly laid out their agricultural/marketing and nutrition/health goals, and strategic objectives (SOs) through defined results, intermediate results (IRs) and sub-IRs for reducing food insecurity and poverty. Successes, real impacts and behavioral changes that have been made in achieving these objectives will define the focus of this review. In doing so, we hope to be able to better address the validity of a number of development hypotheses such as the following: *“Integrating household level health/nutrition interventions with improved agricultural production systems for increased productivity and marketing will have greater and more sustainable impact on intended target beneficiaries than if either of these are undertaken separately with different target groups”*, or a related one: *“Households that receive nutrition education along with agricultural technology assistance have lower incidences of childhood stunting and maternal anemia than those households that receive the technology assistance only”*. If true, such statements have USAID programming consequences. Why, for example, after years of effort in Mozambique, does ‘stunting of under 5 years of age children remain high at 42.6%’ (2011 Mozambique DHS report)? This review will address such questions as well as focus on a number of key indicators and MYAP

program themes (like stunting, exclusive breastfeeding, months of food security, mother's clubs, farmer associations and marketing).

An executive summary is not provided with this review as the consultant would refer the reader to the closing synthesis and conclusion sections of this report which actually provide such a summary.<sup>1</sup>

## 1.1 Purpose of MYAP Reviews

The scope of work for this consultancy (December 28, 2012) clearly laid out the background and context for this review, and is provided below as given to the consultant.

*"The basic indicators demonstrating the economic and social gains that Mozambique has made in the past decade, while well known, highly lauded and showing favorable and encouraging trends, tell two stories. While economic growth has proceeded at an average rate of 8% annually, this growth is relative to an extremely low economic base as Mozambique continues to rank among the poorest countries in the world. The United Nation's Human Development Report 2007/2008 ranked Mozambique 172<sup>nd</sup> out of 177 identified countries. The percentage of population living in extreme poverty has fallen from 69.4% in 1977 to 54.1% in 2003, but this percentage still translates to ten million Mozambicans attempting to meet their basic human needs on an income of less than one dollar a day. Nearly 60% of the population lives on less than two dollars a day."*<sup>2</sup>

*The poverty levels have been declining over the years and this is reflected in improvements in some indicators like infant mortality rate that dropped from 79 to 64 deaths below age 1 per 1,000 live births in 2003 and 2007, respectively. Other child wellbeing indicators have not improved much however, for example 42.6% of the under 5s were stunted with 14.0% of them underweight<sup>3</sup>. The proportion of young children receiving all required vaccinations was found to have fallen well short of the 100% goal. Among children 12 to 23 months, 64.1% had received all basic child vaccinations (70% urban and 60% rural). A high proportion of mothers, 83.1% were able to produce vaccination cards. The same report indicates that the prenatal care and delivery assistance from skilled providers (doctor, nurse, midwife, or other health personnel) were quite good. Of births in the five years before the survey, 90.6% of women had prenatal care from a skilled provider. But only 54.3% had had a skilled attendant at delivery; urban proportion was much higher than their rural counterparts 80.3% compared to 44.3%.*

*For more than a decade, the US Government has supported a series of consecutive food security projects in Mozambique using PL-480 Title II resources with the aim of improving food security in the country. Currently, there are four Multi Year Assistance Programs (MYAPs) being implemented in Zambezia, Nampula, and Cabo Delgado provinces by four agencies: Adventist Development and Relief Agency (ADRA), Food for the Hungry (FH), Save the Children (SAVE) and World Vision (WV). The four partners wish to learn from their interventions over time in terms of (behavior) changes among the target population in food availability, access, and utilization."<sup>4</sup>*

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<sup>1</sup> These sections are 3.0: MYAP Program Synthesis of Best Practices; 4.0: Integration/Linkage of Agriculture with Nutrition/Health Activities; (5) Challenges & Missed Opportunities; and (6) Conclusions: What Worked Best?

<sup>2</sup> INE, 2003

<sup>3</sup> DHS 2011 summary report

<sup>4</sup> Text taken from Request for Proposal, Review of Title II Behavior Change Programs in Mozambique, World Vision (Monetization Consortium lead) on behalf of ADRA, FH, SAVE, and WY MYAPs, page 4, December 28, 2012.

## 1.2 Study Methodology

A detailed description of the methodology used in this study is provided in the protocol for this consultancy in Annex 4. Essentially, however, each MYAP was given the opportunity to introduce the consultant to those groups whom they believed best evidenced success or ‘what works best’ within the different major components of the program (agriculture and nutrition/health). A log of field visits and scheduling of activities in Annex 5 provides a daily commentary on major issues that took place during the field visits, with observations. In summary, besides key interviews with MYAP program technical and management staff (cf. Annex 3), most of the time was spent in meeting with at least 9 groups of beneficiaries in several locations of each MYAP. Because not all sub-objectives for each of the MYAP strategic objective could be explored in-depth, a decision was made to focus on several specific ones with reference to agricultural production and increased incomes, while focusing in on issues of exclusive breastfeeding and changing behaviors with respect to nutrition, food security, food use and availability within households. Additional information was brought in from MYAP technical reports and IPTT monitoring tables of key indicators (cf. Annex 2).

These beneficiaries were organized, whenever possible, into three major focus groups; those whom the specific MYAP technical people considered to be particularly good examples of successful outcomes (‘what worked’) for (1) nutrition & health oriented activities, (2) agricultural & marketing activities, or (3) the integration of nutrition/health and agricultural/marketing activities. As noted earlier, when the MYAPs began in 2008, there was NOT a conscious or intentional effort to integrate the two activity types – this came two years later (2010) as Feed the **Future** program thinking began to influence USAID Mozambique program strategy. As a result, coming out of the earlier Title II DAP programs, there were farmers groups and associations meeting certain criteria in one area, while health and nutrition promotion through mother’s clubs might well be in entirely different geographic areas.

When meeting with each of these beneficiary groups, the first task was to try to create 3 additional sub-groups, when possible and as illustrated below, to highlight potential impacts that might become apparent to specific sub-groups because of the MYAP approaches used. The message below was sent by the consultant to each MYAP field office prior to the initiation of fieldwork, in an effort to help them prepare appropriately the specific kinds of focus groups requested for:

“Let me explain the choice of groups to be interviewed once again. Groups (interviewed) will always include mothers of households (and fathers too, esp. in case of agricultural households). The way I would select the minimum of 9 groups to visit in your MYAP would be the following. **ALL groups will be asked both nutrition and agricultural questions.**

(1) 3 sites/villages that have best successes in application of nutrition/health messages of the MYAP (nutrition Strategic Objective)

(a) Group 1 - **between 10-15 mothers with current babies 6 months or younger**; fathers can come to this meeting too. The mothers MUST bring the growth monitoring cards of ALL THE CHILDREN UNDER 5 YEARS that she has had, along with the growth monitoring cards for all of these children. We will be collecting these cards and taking data from them while the consultant is interviewing the group.

(b) Group 2 - **between 10-15 mothers with a child between 6 months and 24 months (under 2)**; fathers are encouraged to come (in part of a father’s group); The mothers MUST bring the growth monitoring cards of ALL THE CHILDREN UNDER 5 YEARS that she has had, along with the growth monitoring cards for all of these children. We will be collecting these cards and taking data from them while the consultant is interviewing the group.

(c) Group 3 - **between 10-15 mothers from farmer associations with a child 1 - 24 months of age**; husbands of the women who come must also come to this meeting; he mothers MUST bring the growth monitoring cards of ALL THE CHILDREN UNDER 5 YEARS that she has had, along with the growth monitoring cards for all of these children.

We will be collecting these growth monitoring cards and taking data from them while the consultant is interviewing the group.

(2) 3 sites/villages that have best successes in application of agriculture/marketing messages of the MYAP (Agriculture Strategic Objective)

(a) Group 1 - between 10-15 mothers with current babies 6 months or younger; fathers can come to this meeting too. The mothers MUST bring the growth monitoring cards of ALL THE CHILDREN UNDER 5 YEARS that she has had, along with the growth monitoring cards for all of these children. We will be collecting these cards and taking data from them while the consultant is interviewing the group.

(b) Group 2 - between 10-15 mothers with a child between 6 months and 24 months (under 2); fathers are encouraged to come (in part of a father's group); The mothers MUST bring the growth monitoring cards of ALL THE CHILDREN UNDER 5 YEARS that she has had, along with the growth monitoring cards for all of these children. We will be collecting these cards and taking data from them while the consultant is interviewing the group.

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We will be collecting these growth monitoring cards and taking data from them while the consultant is interviewing the group.

(3) 3 sites/villages that have best successes in application of integrated agriculture/nutrition messages of the MYAP

(a) Group 1 - between 10-15 mothers with current babies 6 months or younger; fathers can come to this meeting too. The mothers MUST bring the growth monitoring cards of ALL THE CHILDREN UNDER 5 YEARS that she has had, along with the growth monitoring cards for all of these children. We will be collecting these cards and taking data from them while the consultant is interviewing the group.

(b) Group 2 - between 10-15 mothers with a child between 6 months and 24 months (under 2); fathers are encouraged to come (in part of a father's group); The mothers MUST bring the growth monitoring cards of ALL THE CHILDREN UNDER 5 YEARS that she has had, along with the growth monitoring cards for all of these children. We will be collecting these cards and taking data from them while the consultant is interviewing the group.

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Please note the following: In cases where ALL of groups are truly integrated, then we will only need 6 sites/groups for the above nutrition/agriculture discussions. You may then select a couple other groups to focus on exploring the resiliency Strategic Objective (if you have it).

I am assuming that in each MYAP there are some areas or groups where the focus has been mainly in agriculture/marketing and in other areas the focus mainly on health/nutrition activities (with mother/fathers clubs, growth monitoring, etc.). I find that in OCLUVELA, OSANZAYA, and SANA this is true."<sup>5</sup>

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<sup>5</sup> This was sent out as an email February 20, 2013, following the third day of in-Maputo team meetings with each of the concerned MYAP partners, and before actual fieldwork was initiated. Being the first, FH in Cabo Delgado, did not have sufficient time to organize community groups for interviews which would begin only three days later on February 22 (see Annex 5, schedule).



Needless to say, methodologies and best intentions established can also run into the realities of fieldwork. In some cases, MYAP field offices did not receive clear instructions on nature of the focus groups to prepare for the consultant's visit. The weather did not always cooperate either. For example, on Monday, February 25,



the consultant was supposed to interview three FH groups in the Mitope area of Cabo Delgado. To reach there, we had to pass through a low area where FH had recently completed a strong



cement bridge. After an all night and morning rain, we arrived there to find the road impassable – that the dirt had been washed away from around the cement structure in a couple places (see photos below). We had to return to town to use the rest of that day working on how to at least acquire data from this and other areas to support the review.



Finally, in an attempt to support some of the qualitative learning taking place, the consultant asked each MYAP partner to undertake an analysis of selected existing data. This included data on farmer association and forum activities as well as growth monitoring data for 12-month periods (one between March 1, 2012 to February 28, 2013 (12 months)<sup>6</sup>, and the second for a similar 12 month period as far back historically as such data exist). As it turned out, data for the latter proved too time-consuming to put together and so GM data was obtained for only those communities actually visited by the consultant. Data to be shown are the percentage splits between healthy (green), those at risk (moderately malnourished) (yellow), and those at risk (severely acutely malnourished) (red) children that were weighed each month (or every other month in the case of FH), based on the Ministry of Health growth monitoring card each mother has for the first 59 months of each child (cf. Annex 8 for data provided by MYAPs).

### 1.3 MYAP Focus Areas (geographically and technical themes)

The Mozambique MYAPs were initially designed as three-year programs, beginning in late 2008. However program economies and results permitted two no-cost extensions to these programs through the end of 2013. As described in the SOW for this assignment (Annex 1), the four MYAPs have functioned by monetizing wheat through an umbrella entity led by World Vision called 'Monetization Consortium' (MONCOM). This P.L. 480, Title II program has focused in three northern Mozambique Provinces of Zambezia, Nampula, and Cabo Delgado, and in the case of Zambezia and Nampula, have built on 10 years of previous Title II DAPs. Two MYAPS (World Vision with 8 districts and ADRA with 5 districts) have focused their activities within Zambezia, while Save the Children, partnering with Africare and CLUSA have worked in 14 districts within Nampula. Food for the Hungry focused its attention in four districts of Cabo Delgado.

<sup>6</sup> This period was chosen, as it should illustrate well the hunger months of this region between December and March each year. Based on how their data sets are recorded, this period may be shifted one month either way for a particular MYAP. FH, for example, only takes measurements every two months, beginning in February, so February 1, 2012 would be a better start-off date for this MYAP.

Targeted (agriculture and nutrition/health) beneficiaries were set for each MYAP program as summarized below:

|  |   |
|--|---|
| <b>OCLUVELA (World Vision):</b>          | 9,899 households (HH) for Ag/Marketing & 202,312 HH for nutrition/health & 9,594 HH for community resiliency program (out of estimated 1,758,165 HH)                                |
| <b>OSANZAYA (ADRA):</b>                  | 37,500 HH for Ag/Marketing & 44,000 HH for nutrition/health (out of estimated 1,204,009 HH)   |
| <b>SANA (Africare, CLUSA, and Save):</b> | 71,523 direct beneficiaries for Ag/Marketing, 368,256 direct beneficiaries for Nutrition/health, 126,426 direct beneficiaries for resiliency programs (out of estimated 566,205 HH) |
| <b>FH:</b>                               | 102,888 households (out of estimated 214,950 HH)  |

Technical messages promoted by the MYAPs fell into three major components – organized with different Strategic Objective numbers.<sup>7</sup> A summary of some of the major accomplishments of each MYAP is provided in the first table provided in Annex 8. All MYAPs shared a common goal to reduce food insecurity among ‘vulnerable populations’, though ADRA was more focused towards ‘improving income growth’.

Each MYAP had:

- (1) one component focused on improving health and nutrition, which included such themes as improved sanitation, essential hygiene behaviors (EHB), and safe drinking water.
- (2) A second component centered on improving agricultural production systems and marketing through farmer associations, unions/forums, and cooperatives.
- (3) A third smaller component sought to increase (selected) community capacity to influence factors that affected food security and resiliency shocks – working closely with the GoM Instituto Nacional de Gestao de Calamidades (NGC).<sup>8</sup> The consultant met with several of these groups, but did not spend as much time with this component as the other two.

Furthermore, the two primary MYAP components also had the added task of seeking to integrate the two among their beneficiary populations – a task that was included after the MYAPs had been initiated.

## 2.0 MYAP Lessons Learned, Best Practices & Successful Strategies

Lessons learned recorded here include many of those identified by the MYAPs themselves through their annual results reports, with observations by the consultant; included here are also observations made by MYAP technical staff when interviewed by the consultant. While a number of key ‘best practices’ are identified here, their success certainly was built upon a range of complementary activities (like market information systems established, farmers receiving literacy training, business development skills, construction of grain storage facilities, increased access to inputs, construction of latrines and water points). Some MYAP organizational or technical strategies appeared to the consultant to expand or heighten the impact of specific activities, and these are discussed below as well. The consultant found it curious that some of the unique aspects of MYAP strategies in communicating to targeted beneficiaries do not come out clearly in reading technical reports. For example, in reading both WV and ADRA technical reports, one would not easily pick up just how fundamental the development and training of the Community Health Councils (and the different categories of community

<sup>7</sup> It would have been helpful if MONCOM, at the start of the program, could have sought to harmonize the MYAP program results framework with common strategic objectives (SOs) and intermediate objectives (IRs) to make review of each MYAPs Indicator Performance Tracking Tables (IPTTs) easier. The specific SO’s and IRs for each MYAP can be reviewed in Annex 1.

<sup>8</sup> ADRA had to drop this component after a year because of unforeseen implementation difficulties.

volunteers) were in the successful implementation of these programs. So much attention is given to reporting on specific indicators that one loses a perspective of the forest and how the forest itself was being impacted.

The presentation below follows from north to south. The consultant began field visits and interviews with focus groups in the province of Cabo Delgado with FH, then moved on to Save the Children's MYAP program in Nampula province, followed finally with World Vision and ADRA programs in Zambezia province.

## **2.1 Food for the Hungry MYAP Program: Lessons Learned, Best Practices & Successful Strategies**

### **2.1.1 Background**

The Food for the Hungry (FH) MYAP, was focused in the most underdeveloped and chronically food insecure regions served by the 4 MYAPs - the province of Cabo Delgado. Its focus was on 50 communities within the three districts of Palma, Nangade, and Mocimboa da Praia and served an estimated target population of about 102,888 households (or some 617,328 people). Unlike the other 3 MYAPs, FH did not build from a foundation of over 10 years of previous Title II DAP 1 and DAP 2 programs dating back to 1997. The MYAP began in 2008 by opening up new relationships and programs – creating and providing training to Farmer Field and Life groups and health/nutrition Care Groups in its underserved communities.

FH's three strategic objectives were similar to the other MYAPs, with one component focused on nutrition/health activities, one on improved agricultural production/marketing activities through farmer groups, and a smaller component to influence selected communities for improved resilience and disaster preparedness (cyclones, floods and drought). All three components were integrated in the same geographic areas of focus. In addition to this, to achieve the number of mothers reached by the program, two peri-urban areas were reached by the nutrition program.<sup>9</sup> Integration of agricultural and nutrition/health components was not planned at the outset of the MYAP, though as the program evolved in 2010, efforts were made to integrate these through messages given by both FH health and agricultural personnel, but were not intentionally linked as done with OCLUVELA (World Vision) and OSANZAYA (ADRA) programs. Not all 416 Farmer Field & Life Groups (FFLGs) included Care Groups, and not all 139 Care Groups and their 1,529 mother groups (of about 10 mothers each) were included in FFLGs. FH communities were targeted with both major program components, and many beneficiaries are involved in both nutrition and agricultural activities. FH staff was selected for each different component; they did interact frequently to plan and coordinate activities. FH notes that 'a practical example is the vegetable gardens for mothers, an activity that has been supported by the agricultural staff through training of mothers who are associated with the nutrition program's activity Care Groups and groups of mothers'.

FH had a strong program of training farmers that included crop spacing, crop husbandry, mulching, seed conservation, timely harvesting and improved commodity storage. Key commodities focused on commercial crops like sesame and rice, but also extended to groundnuts, cowpeas, cashew nuts, beans, and maize. Efforts were made to have a gender balance, and program reports showed significant female participation in all activities – frequently approaching 50%. FH did not promote use of livestock activities within its areas of operation.

According to FH one of the most successful activities they undertook to increase community resiliency to food security shocks was in the creation of Group Savings and Loan Associations. These are an informal banking system that has allowed communities to save and borrow for diverse needs, including entrepreneurship activities and basic infrastructure building (including water harvesting tanks). This has been done in a highly sustainable manner, with no external capital provided.

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<sup>9</sup> In these peri-urban areas, such as the Nanduadua community visited by the consultant, most of the households made their living from fishing or small-business opportunities, and very few were farmers.

### Farmer Field & Life Groups (FFLGs)

By the end of FY 2012, FH had succeeded in helping to organize 7,907 farm households (51% men and 47% women) into 416 FFLGs – essentially farmer associations – introducing key technologies for improved agricultural production, as illustrated in Table 1 below from their most recent report.<sup>10</sup> Support was subsequently provided in helping 154 FFLGs to become legally registered with the GoM, with legal rights to commercialize commodities in bulk and have bank accounts in their association names. FH has not been promoting the use of either the FAO type steel silos or Gorongosa type improved traditional silos for household level bulk storage, but has been more focused towards non-chemical grain storage and seed storage systems. However problems encountered with access to neem seeds for instance does not make this a feasible solution and attention might better be directed towards the hermetically sealed plastic sacks being tested and distributed by the SAVE MYAP.

**Table 1: Agriculture Program Beneficiaries in 2012**

| District          | # of groups | Number of beneficiaries in agriculture program |             |             |
|-------------------|-------------|--|-------------|-------------|
|                   |             | Men  | Women       | Total       |
| Mocimboa da Praia | 157         | 1852   | 1047        | 2899        |
| Nangade           | 160         | 1388   | 2114        | 3502        |
| Palma             | 99          | 917  | 589         | 1506        |
| <b>Total</b>      | <b>416</b>  | <b>4157</b>                                    | <b>3750</b> | <b>7907</b> |

### Farmer Association Legalization

MYAP efforts have resulted in the legalization of 154 associations, of which 118 are the Farmer Field and Life Groups. Among the 192 Village Savings and Loan Associations (VSLAs) established, 36 of these have also been legalized, as shown in Table 2 below. The aggregated capital saved through these groups has reached \$264,035, representing funds that have now become available for loans among members and the establishment of many new micro-enterprises and the ability to meet new household consumer needs. Membership in these groups includes 3,167 individuals – each representing different households – and 52% of these are women.

**Table 2: Status of legalized Associations**

| Description                           | Mocimboa de Praia | Palma | Nangade | TOTAL |
|---------------------------------------|-------------------|-------|---------|-------|
| Legalized Associations in Agriculture | 34                | 19    | 65      | 118   |
| Legalized Associations on VSLAs       | 9                 | 7     | 15      | 31    |
| Total:                                | 43                | 26    | 20      | 149   |

\*Six new associations have been legalized recently.

### Marketing

As Annex 8 indicates, FH has yet to move into large scale aggregated marketing of commodities through either the FFLGs or the 16 existing forums. Formal sales by the FFLGs and forums have been limited to a total of 99 metric tons (79 MT of sesame and 20 MT of rice), all to one commercial buyer in Pemba. The values of the commodities sold through this buyer have reached an aggregate of \$93,501, and therefore improved diversification to other market buyers is desirable. However, most of the sales from these developing farmer associations continues to be through local merchants and markets, and farmers have been encouraged to continue selling where they can obtain the best prices and promptly. FH data shows that the volume and value of beneficiary market transitions has been steadily growing each year, with aggregated production to date of 500 MT of groundnuts, 421 MT of sesame, 550 MT of pigeon pea, and 680 MT of rice. The MYAP has

<sup>10</sup> FH 2012 Annual Results Report, November 5, 2012, p. 3.

not tracked the value of these locally sold commodities, but clearly this is an area where linkage to new regional buyers would be helpful to the long term sustainability of these farmer groups.

### **Mothers (and Fathers) Groups**

FH has successfully communicated important, and useful, health/nutrition and HIV/AIDS messages to mothers through their 195 Care Groups within the 50 Cabo Delgado communities targeted. Each Care Group is encouraged to have about 10 Mother Leaders (including some Father Leaders), who themselves lead a small group of 10 mothers (or fathers), some of whom include pregnant and lactating women (PLWs). These mother groups are set up for mothers with children less than 2 years of age, with some 15,290 such mothers reached. FH began to reach out to the fathers in these same groups in 2012 by creating 90 fathers groups with a total membership of 4,684 fathers. Mothers leave their groups when their children are over two years of age to be replaced by other woman with a child in the correct age range.

As currently organized – created around of the concept of a volunteer Leader Mother with a group of 10 women with children under 2 years of age – the composition of these ‘groups’ keeps changing. Within a two-year period, unless a woman has another baby before her initial child exceeds 24 months, she must leave the group and make place for another mother. The only constant is that the Mother Leader remains in place. When asked, mothers and mother’s leaders both stated they did not like removing mothers from the group. This would appear to limit the establishment of an enduring mother support system within the community. If mother’s groups could stay together as a form of ‘mothers group’ (made up of mother friends/neighbors who like and trust each other), then they could move through the continuing aging of their children, as perhaps new ones are born, and perhaps be the ideal setting for other program interventions. Such interventions might include training in vegetable gardening, saving and loan groups with linked micro-businesses, and agricultural activities with their children’s fathers.<sup>11</sup> This could lead to the development of the kind of social support systems mentioned above that might outlive the life of the MYAP program.

### **Bi-Monthly Growth Monitoring and the GM cards**

The Government of Mozambique, through the Ministry of Health, does not permit anyone but its own health agents at government health clinics and hospitals to register information on the GM cards. Virtually all mothers of young children under 5 years of age have such a card for their children, given by the Health Service. So a review of such cards will show, in most cases, that while vaccinations and other treatments may be recorded on these cards, it is only those visits to the Government Health Clinic when a child is weighed that one will see any ‘points’ placed on the growth card, shown above. And this is usually at birth, and perhaps if the child was ill and visited the clinic. Most of the growth development chart remains blank. All the growth-monitoring records undertaken by FH over the past few years, every two months, for over 22,933 (of which 11,382 are under two) children are NOT registered on these cards. The results are communicated to the mother verbally if there may be a malnutrition issue or if child is normal, but she has no record of the event on her GM card. Parents therefore cannot follow the evolution of their child’s development over those first 59 months of life. Ideally, of course, the GOM Health Service would authorize an NGO’s health workers to fill in at least the growth monitoring results of the child. Doing so would give the mother & father greater ownership of the weighing process and personal interest in the results.

FH weighing sessions are undertaken at community selected locations – perhaps the local health clinic constructed by the project, or some other structure put up by the community itself for this purpose. Growth monitoring takes place every other month and only 5 times each year – so the potential impact of this program is somewhat limited as much can happen over a two month period, and particularly the 4 month period between the October weighing’s and the next weighing in February each year. Certainly the response from

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<sup>11</sup> *The MYAP did undertake such activities, but not necessarily focused through these mother groups or farmer associations.*

mothers interviewed about the importance of GM for their children was not as dramatic as that encountered among the other MYAPs with monthly monitoring. Monthly monitoring is certainly more appropriate and permits more timely interventions when problems become evident.

### 2.1.2 Lessons Learned

- FH found that the impact of promoting improved, enriched foods for children using locally available nutritious foods was greatly enhanced through recipe competitions when they focused greater attention on the participation of the mothers in the Mothers Groups, as opposed to just the Mother Leaders, as was previously the case.
- Moringa greens have proven critical to enriched food recipes in all the homes of participants, and their use has increased significantly as a result. During recipe competitions, mothers have been encouraged to develop their own recipes which include moringa, thereby expanding use as well.<sup>12</sup>
- Growth monitoring of children under five has permitted identification of those that may be at risk and some of whom (the severely malnourished) are sent to the local health center for consultations and recovery procedures. One important activity of Mother Leaders and FH health facilitators is to follow up through home visits and FH has initiated a potentially very useful tool in the use of mobile phone technology with the support of an organization called Dimagi. It is expected, as so many rural peoples are acquiring cell phones, that this could dramatically improve nutrition surveillance and counseling of the parents of these at-risk children.
- Mother Leaders have been shown to be critical in encouraging mothers to bring their children to growth monitoring sessions, as they gather all of their 10 mothers in their own mother group to attend the sessions. FH has also noted that enriched porridge preparation demonstrations during GMP sessions encouraged participation in the GM sessions. This was an issue in other MYAPs as well, and creative ideas are needed to encourage mothers consistently bringing back their children month after month for proper monitoring.

Certainly a review of FG GM data shows fluctuations of 40 or more children in the number of weighing from one bi-monthly session to the next, and those coming are not necessarily those who came the last time either (cf. growth charts for 0-24 months in Annex 8 for four communities visited by the consultant). Nabduadua community showed a high of 2119 children weighed (August 2012) to a low of 1,343 five months earlier in April – **a fluctuation of 776 children!** One notes from these tables that there are almost always children who are severely malnourished every weighing session, and there are always many children who register as malnourished as well, or are at risk. In Nabduadua community again, we see at risk children (yellow) swing from a low of 8 in April 2012 to highs of 166, 211, and 138 in August, October, and the following February 2013, respectively. The highest severe malnutrition takes place during the hunger months (see February 2012) and 2013 and we don't know what happened in November, December, January when the hunger season peaks, since FH does not take measurements during these months!

It is important for the MoH and FH to continue working together in the outreach vaccination campaigns as this gives the community volunteer facilitators more credibility while doing their trainings. Linking this to community GM sessions also increases the credibility of the local health volunteers. This also extends the reach of the government services, and improves the perception of government services by the community as regards vaccinations and deworming of children.

- Promotion of cash crops with ready markets – even if only within the region itself - stimulates other production activities, clearly demonstrated by sales of sesame bringing in significant income to farmers. Farmers now use the money earned to open up more land for other food crop production.<sup>13</sup> Focus group discussions confirmed repeatedly the fact that additional land was now being cultivated by program beneficiaries, leading to both increased food availability but also increased incomes permitting greater flexibility to access food needs and other household livelihood needs.

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<sup>12</sup> According to the FH, recipe competitions have taken place among the four Mozambique MYAPs, USAID/Mozambique has created a recipe book based on these for distribution.

<sup>13</sup> This and the next nine bullets were lessons learned documented by FH in their most recent FY 2012 Annual Results Report, November 5, 2012, pp. 15 and 16 with some commentary from the consultant.

- Direct contact between buyers and marketing Forums has led to closer relationship between buyers and farmers. This will lead to sustainability in crop sales long after the project closes.
- Savings are much higher in areas where crop sales are also high. A good example is Nangade where farmers get money from sales of sesame and cashew nuts. Village Savings and Loan Associations also open up new avenues for income diversification which increases food security throughout the year.
- Working through community health Volunteers (CDC members, Care Group leaders, Mother Leaders) has proven to contribute greatly to program efficiency and sustainability. Recognition of such volunteers by community leaders and beneficiaries is a form of non-monetary compensation that motivates volunteers to continue sacrificing their time for services to their community.
- FH itself strongly believes that there is great potential for fathers, as key decision makers at the household level, to form their own care groups with the health and nutrition program. Simple contextualized messages in a poster format work best for them, unlike the mothers who have enough time to go through the entire flip chart messages. FH noted that the introduction of the Father Group program has been a ‘game changer with respect to behavior change’ in that it has helped the family unit make the changes discussed in the Care Group curriculum, including improved feeding practices, hygiene practices, and family planning choices.<sup>14</sup> Yet there was some push-back from some of the men in the focus groups – one urban male said “*you teach my wife, you teach me*” – i.e. it wasn’t necessary for him to be in a ‘fathers group’.
- Involvement of the CDCs in training, meetings and addressing Care Group challenges increased motivation and participation of the mothers in the groups. For example when the Mother Leaders received *capulanas* (a piece of cloth tied around the waist), the MBs became demotivated and decided not to continue attending the sessions. The CDCs intervened by explaining to the Mother Beneficiaries that the *capulana* was just a teaching aid for the Mother Leaders and that the teachings the mothers were receiving were much more beneficial to their families and will leave a long lasting positive health impact in their families especially their children. This resolved the problem and the Mother Beneficiaries continued attending sessions.
- During formation of Care Groups, it is important to let the mothers select their own Mother Leaders so as to reduce on conflict issues later on in the CGs. It also increases cohesion and understanding of the Care Group members.
- With proper training of the Care Group participants comes increased knowledge and skills among community beneficiaries on how to prevent transmission of HIV/AIDS and also care of those infected by HIV/AIDS. The last mini KPC showed 98% of the mothers had sought to know their HIV status and 87% have proper knowledge about breastfeeding when the mother is HIV+. <sup>15</sup> Though exclusive breastfeeding of infants 6 months or younger was not a specific question in this survey, the consultant’s own questioning on this suggests that currently this is close to 100% among Care Group mother beneficiaries.
- Communities have the potential to develop their own initiatives once they are given a technical “jump-start” (capacity building trainings including governance, community holistic development, etc.) But to provide communities with all materials and labor hampers their own development process by creating further dependency on outside aid.
- On CDC exchange visits, a visiting CDC always is willing to be visited in order to show their community performance. Hence, the visiting CDCs facing challenges in performing some community tasks is empowered to overcome those challenges.

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<sup>14</sup> FH 2012 Annual Results Report, November 5, 2012, p. 8.

<sup>15</sup> FH Mozambique Mini- Knowledge-Practice-Coverage (KPC) 4 and Anthropomorphic 3 Survey Report, October 4, 2012

### 2.1.3 Best Practices

(1) **Annual Mini-KPC and Anthropometric Surveys:** FH has consistently produced outstanding and useful results through these surveys, mastering the methodology that has evidently influenced management decision making on programmatic issues and permitted the timely completion of IPTT reporting on key indicators.

(2) **Community Development Committees (CDCs), Care Groups, Mother Leaders, and Mother Beneficiaries:** FH makes a very important observation in their most recent “Mini-KPC 4 and Anthro 3 Survey Report, October 2012). It is stated that *“behavior change is not a one-time activity. In contrast it requires time, effort, energy, and the development of social support systems”*, and then goes on to point to the project’s approach to CDCs and the Care Group methodology with its thousands of Mother Leader volunteers. FH helped form 48 CDC’s and train some 1,185 community leaders within them, not including their support with the formation of the 195 Care Groups, composed of 2,486 volunteer Mother (nutrition/health) Leaders training 19,745 mother/father beneficiaries in small groups of at least 10 members each. These men and women proved very effective in passing nutrition/health/sanitation and hygiene messages within their communities. It also points to the importance of the involvement of the Community Development Committees (CDCs) in resolving both Care Group and Farmer Association challenges and in improving the introduction of MYAP activities into communities. Examples include the construction of the 45 JAM latrines for schools and market places into communities supported by FH partner Joint Aid Management and the construction of 25 boreholes and 43 shallow wells and the rehabilitation of additional water points within the three districts. Table 3 below illustrates that good community relationships and collaboration lead to sound results.<sup>16</sup>



| Table 3: Type of Projects Identified with CDC Participation | Projects Started | MOUs signed w/ FH | # of communities involved | Projects Completed |
|---|------------------|-------------------|---------------------------|--------------------|
| First aid center projects                                   | 16               | 16                | 16                        | 15                 |
| Classroom improvement projects                              | 13               | 12                | 12                        | 10                 |
| Well improvement projects                                   | 6                | 6                 | 6                         | 6                  |
| Road/bridge-related projects                                | 2                | 4                 | 4                         | 2                  |
| Market improvement project                                  | 15               | 15                | 15                        | 7                  |
| Maternity projects  | 2                | 2                 | 2                         | 0                  |
| Public latrine project                                      | 1                | 1                 | 1                         | 1                  |
| Community meetings room projects                            | 2                | 2                 | 2                         | 0                  |
| Income generation project                                   | 1                | 1                 | 1                         | 0                  |
| <b>Total</b>  | <b>58</b>        | <b>59</b>         | <b>41</b>                 | <b>41</b>          |

<sup>16</sup> FH 2012 MYAP Results Report, November 5, 2012, p. 14. The communities in this table contributed \$75,020 in local materials and labor to these 58 projects. A challenge in months ahead for CDCs will be how to continue the growth monitoring of their children in the absence of the MYAP – where to get new scales and continued involvement of local health volunteers in this weighing, how to get birth control pills from clinics to women who want them.

(3) **Hygiene and Sanitation:** Among the themes listed by the men and women interviewed in focus groups was always the importance of the improvements in water availability in many communities, and greater awareness about the importance of basic hygiene - safe (chlorinated or boiled) water for domestic consumption, washing of hands before eating, and the construction of household and community latrines, boreholes and shallow wells. The link to prevention of infant and child diarrhea was well understood by beneficiaries. Women repeatedly mentioned their husbands helping in the construction of latrines, trash pits for household refuse, and dish drying racks benefiting over 4,000 households. Many of these were observed, including the tippy taps for hand washing placed near the home latrine. The importance of keeping home courtyards clean, swept, including homes was often mentioned

(3) **Vegetable Production:** The joint training of Mother Leaders in vegetable production and the final establishment of vegetable gardens in April and May in the MYAP communities has increased food diversification and promoted additional household nutritional sources of food, and extra income as well.

(4) **Recipe Competition:** The competition in creating nutritious, enriched foods for household children, particularly infants, using locally available foods, with emphasis on the four food groups and use of moringa leaves proved to extend the popularity and impact of this activity across communities.



(5) **Exclusive Breastfeeding & Enriched Porridge for Young Children:** Significant reductions were evidenced in malnutrition resulting from continuous training of mothers on the need for balanced diets and the exclusive use of mother's milk during the first six months of an infant's life, followed by continued breastfeeding and hygienic behaviors around food and water consumed. These two topics were always on the top of the list of 'most important things learned' mentioned by focus groups. Focus groups mothers noted that they did see a difference in the babies raised under these new conditions – sick less often, crawling and walking sooner – they 'look healthy'.

(6) **Increased Production – Increased Incomes:** There was clear evidence of increased household incomes from the sales of sesame and other crops that have been promoted by the FG agricultural program, leading to increased production for many crops, increased yields per hectare, subsequently followed by increased field sizes. The support for improved storage of commodities and improved market prices received for the bulking of commodities helped to achieve these results as well. The adoption of basic crop husbandry practices led to the increased productivity noted per hectare of four key crops promoted: sesame, rice, cowpeas, and groundnuts. Adoption of key conservation agriculture techniques (no burning, ridging, mulching of weeds/field grass).

(7) **HIV/AIDS Communication:** The communication through radio, theater, and verbal messages through the structures created by the MYAP (CDCs, Care Groups, Mother Groups, Farmer Field and Life Groups, Village Savings and Loan Associations) created clear awareness within the districts of these messages and methods for mitigating against them.

(8) **Village Savings and Loan Associations:** The introduction of 192 VSLAs within the 50 communities served clearly had made an impact upon many beneficiaries, and was always mentioned by the focus groups as among the most appreciated MYAP interventions. Besides being a forced means of savings for many households, it also led to the establishment of a number of new micro-enterprises and permitted many households to hire outside labor to increase the size of their fields – permitting increasing food security and income flows.<sup>17</sup>

(9) **Growth Monitoring of Children:** Focus groups always included this as among the most important interventions of the MYAP, and one which they strongly hoped would continue beyond the life of the project. How else can they know if their infants and young children are growing properly they asked? Yet it was also clear that most mothers had no idea how to interpret the marks on their children's growth charts – even some of the Mother Leaders failed to interpret these correctly.



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<sup>17</sup> Memberships varied from 10 – 30 people and loans varied from 500 M to 3,000 M (\$15 -\$90). What were VSLA loans used for? Focus group members involved in this mentioned the following different activities pursued: construction to their home; paying children school fees, purchase of soap; purchase of fish for resale; paying for labor to open a rice plot or other fields; purchased iron sheets for roof of house; purchased cashews for resale; purchased a bicycle; The VSLA also puts money into a social fund for members which helps out in emergency situations or funerals. This activity could have been greatly expanded if it could have been channeled through the over 1,390 mother groups established and 416 Farmer Field & Life Groups from the beginning of the program – though clearly it was essential that the groups that formed were serious in their intentions and trusted each other. FH might consider a 'success story' around a successful VSLA, explaining its functioning, the nature and amount of loans given out, with a follow up of impact of these loans on the households.

## 2.2 SANA MYAP (Africare, CLUSA and Save)

### 2.2.1 Background

The SAVE the Children led SANA MYAP has been a five year P.L. 480 Title II food security program funded by USAID and implemented in 14 (of 20) districts within Nampula Province in northern Mozambique, in collaboration with Africare and the Cooperative League of the USA (CLUSA). SANA activities were built upon activities initiated in two previous DAPs dating back to 2003; this MYAP began with a baseline in October 2008, and will be ending in July, 2013. As stated, *“the program goal is to decrease household food insecurity in Nampula Province through three strategic objectives (SOs)*

- *SO 1: Increased adoption/use of market driven agricultural production and sales practices and services, targeting a total of 71,523 farmers;*
- *SO 2: Improved capacity in communities and districts to mitigate, prepare for, and respond to shocks, indirectly benefitting a total population of 368,256;*
- *SO 3: Increased adoption of key MCHN practices and use of MCHN services, targeting 94,520 children under the age of 5 and 31,905 pregnant and lactating mothers.”<sup>18</sup>*

What sets the SANA program apart from the other Mozambique MYAPs is the scope and impact of its programs. Table 4 below compares all four MYAPs against a number of key MYAP program objectives. To begin with, the cost/beneficiary of the SANA program was about \$80/person. Within the agricultural domain, it is impossible to estimate the overall impact of production increases for a wide range of crops for over 77,000 farmers. The \$5,547,145 aggregated sales documented through Farmer Associations, Forums, and Cooperatives is remarkable, and promises to continue to expand significantly every year in coming years (cf Table below). Beginning with a base of only about 200 farmer associations, SANA has helped to organize and strengthen 3,425 Farmer Associations with a total membership of 74,028 households (representing about 440,000 individuals) in 500 communities.<sup>19</sup> The further creation of 104 forums (made up of groups of FAs), and 18 cooperatives is also an important achievement which holds promise of sustainability for these communities for food security in years to come. The district coverage of its programs was summarized recently by SANA in the table below:

**SANA Agriculture (SO1) and Nutrition (SO3) Coverage per District (as of June 30, 2012)**

| SANA Districts | Total of Rural Households* | SO1 - Agriculture |            | SO3 - Nutrition   |            |
|----------------|----------------------------|-------------------|------------|-------------------|------------|
|                |                            | # of Participants | % Coverage | # of Participants | % Coverage |
| Moma           | 41,309                     | 9,097             | 22%        | 27,025            | 65%        |
| Angoche        | 29,652                     | 9,497             | 32%        | 19,215            | 65%        |
| Murrupula      | 62,719                     | 6,938             | 11%        | 22,549            | 36%        |
| Meconta        | 48,554                     | 6,973             | 14%        | 16,364            | 34%        |
| Mogovolas      | 21,357                     | 8,732             | 41%        | 16,912            | 79%        |
| Mussoril       | 10,440                     | 5,582             | 53%        | 9,263             | 89%        |
| Ilha           | 45,536                     | 1,570             | 3%         | 1,247             | 3%         |
| Nacala         | 28,137                     | 3,099             | 11%        | 10,789            | 38%        |
| Mogincual      | 25,979                     | 7,147             | 28%        | 5,580             | 21%        |
| Monapo         | 57,163                     | 5,123             | 9%         | 7,367             | 13%        |
| Nacala-velha   | 15,699                     | 3,286             | 21%        | 6,459             | 41%        |
| Nacaroa        | 23,576                     | 3,309             | 14%        | 8,690             | 37%        |
| Memba          | 50,001                     | 3,633             | 7%         | 8,708             | 17%        |
| Erati          | 50,656                     | 3,119             | 6%         | 5,321             | 11%        |
| <b>Total</b>   | <b>510,778</b>             | <b>77,105</b>     | <b>15%</b> | <b>165,489</b>    | <b>32%</b> |

\*Based on projections of INE 2007

<sup>18</sup> Save the Children Fiscal year 2012 Pipeline and Resource Estimate Proposal, October 31, 2011, p. 1

<sup>19</sup> During the focus groups with mothers groups, the consultant asked the mothers of 7 different groups how many children each woman actually had. Clearly some of the mothers were very young and had had only one or two children; others had had many more. Among 85 women asked, the median was 5 children, and the average was 5.33 children. Adding the mother and father, this would mean an average household size of at least 7, since other people could be present (orphan, aged parent) (and not less than 5 as general population census data suggests). When estimating SANA household size, it would seem that an average of 7 persons/household might be more reasonable, though SANA could have actually asked all households actually worked with about their household sizes (rather than depending on survey data). This would further suggest that the estimates for total SANA direct beneficiaries may be underestimated.

Table 4 above suggests that the SANA nutrition program probably impacted about twice as many households and individuals within the targeted districts than those impacted by the Farmer Association members.

SANA has consistently tracked the quantities and values of key commodities commercialized through Farmer Associations, Forums, and Cooperatives, as summarized in the Table 5 below. Groundnuts and sesame were the clear leaders, much of this exported to countries like India. This diversification of commodities for sale also represents built-in flexibility for farmers to respond to market demand. The Electronic Agriculture Market Information System (ESOKO) initiated by the MYAP currently reaches some 33,000 users through cell phone communications; these are for exchange and dissemination of information regarding market demands, price and supply - which helps FAs, forums, and cooperatives in their annual agricultural planning exercises.<sup>20</sup>

**PROJECTO SANA**

**(AFRICARE, SAVE THE CHILDREN & CLUSA)**

**Table 5: Acompanhamento a Comercialização 2008 - 2012 \***

| Culturas                              | CAMPANHA       |                  |                  |                   |                  |                   |                  |                    |                   |                    |                     |
|---------------------------------------|----------------|------------------|------------------|-------------------|------------------|-------------------|------------------|--------------------|-------------------|--------------------|---------------------|
|                                       | 2008 - 2009    |                  | 2009 - 2010      |                   | 2010 - 2011      |                   | 2011 - 2012      |                    | Total             |                    |                     |
|                                       | Qtd (Kg)       | Valor (MT)       | Qtd (Kg)         | Valor (MT)        | Qtd (Kg)         | Valor (MT)        | Qtd (Kg)         | Valor (MT)         | Qtd (Kg)          | Valor (MT)         |                     |
| Amendoim/ Groundnuts                  | 253,444        | 3,865,021        | 499,779          | 8,135,291         | 1,541,506        | 24,641,011        | 2,386,129        | 56,241,037         | <b>4,680,858</b>  | <b>92,882,360</b>  | <b>\$2,786,471</b>  |
| Gergelim/ Sesame                      | 45,744         | 1,095,416        | 191,011          | 6,066,974         | 323,969          | 10,318,089        | 804,640          | 19,047,559         | <b>1,365,364</b>  | <b>36,528,038</b>  | <b>\$1,095,841</b>  |
| Milho/ Maize                          | -              | -                | 502,915          | 2,034,968         | 817,958          | 3,466,527         | 3,816,376        | 15,096,870         | <b>5,137,249</b>  | <b>20,598,364</b>  | <b>\$617,951</b>    |
| Mandioca/ Manioc/Cassava              | -              | -                | 44,100           | 308,700           | 96,293           | 5,130,050         | 705,713          | 4,939,991          | <b>846,106</b>    | <b>10,378,741</b>  | <b>\$311,362</b>    |
| Feijão Nhemba Cowpeas                 | 33,777         | 276,710          | 132,409          | 982,187           | 548,105          | 3,507,895         | 1,011,012        | 6,697,187          | <b>1,725,303</b>  | <b>11,463,978</b>  | <b>\$343,919</b>    |
| Feijão Boer/ Pigeon Pea               | 20,000         | 95,000           | 32,030           | 304,310           | 119,865          | 1,253,535         | 53,048           | 771,956            | <b>224,943</b>    | <b>2,424,801</b>   | <b>\$72,744</b>     |
| Feijão Holoco/ Mung Beans             | -              | -                | 130,895          | 3,869,710         | 131,095          | 3,870,510         | 7,073            | 59,838             | <b>269,063</b>    | <b>7,800,058</b>   | <b>\$234,002</b>    |
| Hortícolas/ Horticulture              | -              | -                | -                | -                 | 9,326            | 123,915           | 99,270           | 1,222,204          | <b>108,596</b>    | <b>1,346,119</b>   | <b>\$40,384</b>     |
| Arroz/Rice                            | fc             | -                | 25,645           | 199,870           | 53,095           | 393,100           | -                | -                  | <b>78,740</b>     | <b>592,970</b>     | <b>\$17,789</b>     |
| Batata-doce/ Sweet Potato             | -              | -                | -                | -                 | 700              | 11,000            | -                | -                  | <b>700</b>        | <b>11,000</b>      | <b>\$330</b>        |
| Mapira/ Sorghum                       | -              | -                | -                | -                 | 350              | 2,450             | -                | -                  | <b>350</b>        | <b>2,450</b>       | <b>\$74</b>         |
| Feijão Jugo/ Other Bambara Groundnuts | -              | -                | -                | -                 | 75               | 578               | -                | -                  | <b>75</b>         | <b>578</b>         | <b>\$17</b>         |
| Feijão Cute/ Other Var. of Cowpea     | 80,000         | 642,500          | -                | -                 | -                | -                 | -                | -                  | <b>80,000</b>     | <b>642,500</b>     | <b>\$19,275</b>     |
| Feijao Ervilha/ Black Eyed Peas       | -              | -                | 15,525           | 232,875           | -                | -                 | -                | -                  | <b>15,525</b>     | <b>232,875</b>     | <b>\$6,986</b>      |
| <b>Total:</b>                         | <b>432,965</b> | <b>5,974,647</b> | <b>1,574,309</b> | <b>22,134,884</b> | <b>3,642,337</b> | <b>52,718,658</b> | <b>8,883,261</b> | <b>104,076,641</b> | <b>14,532,872</b> | <b>184,904,830</b> | <b>\$5.5 47,145</b> |

Exchange Rate .03 \*US \$

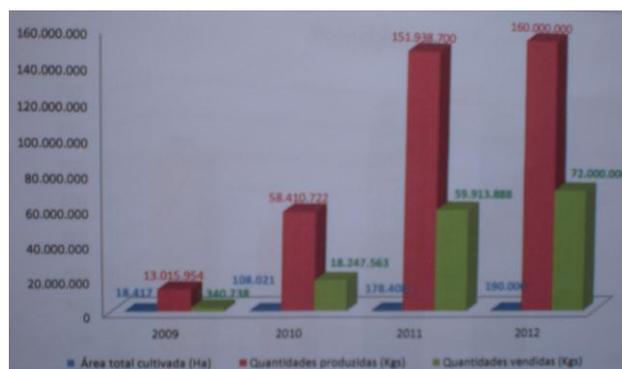
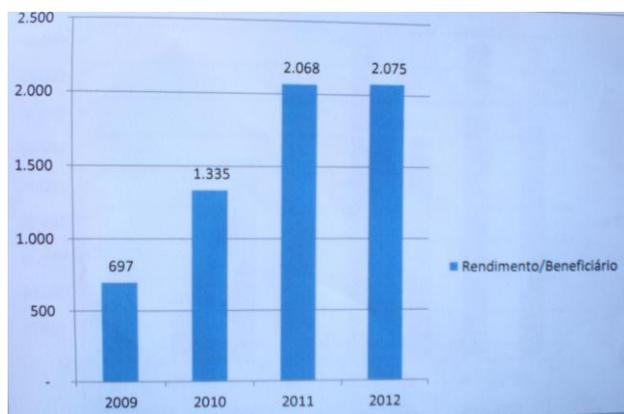
\* Dados extraídos dos Relatórios anuais da CLUSA SANA

Within the health/nutrition domain as well, the help given to at least 375 communities to establish Community Leadership Councils to oversee and support their local community interests and concerns of their populations also holds promise of sustainability in managing their interests into the future. At this time, these

<sup>20</sup> This is described by SANA in this way: "Farmer associations and cooperatives will be linked to ESOKO and SIMA by mobile phones. Each extension worker provides 50 contact numbers to ESOKO and each of the 50 contact persons provides 20 additional numbers. Although the system is currently in the trial stage it is expected that up to 20,000 farmers will benefit from this linkage by the end of Year 4. The 20,000 farmers will be getting information about prices of various commodities at different market places from ESOKO/SIMA and, in turn, will present their offers to the outside market through the same system. SANA also will facilitate linkages between farmers associations and IFDC" (SANA FY 2012 Pipeline and Resource Estimate Proposal Guidelines, October 31, 2011, p.12)

communities, in aggregate currently possess 2,570 volunteer health *animadoras*, led by about 257 trained local health promoters. These people, men and women, have been responsible for the monthly weighing of over 41,456 children under five years of age, each month, and the training and counseling of 166,200 mothers (representing households with about 997,200 individuals)(pregnant, lactating, or with children under 5) organized into 8,310 mother groups. In addition to this some 544 community Village Savings and Loan (VSL) groups have also been formed and are saving funds that have generated thousands of small loans. These have helped to launch micro-businesses or meet other household budgetary needs, which also promotes households food security. SANA technicians themselves note, as well as SANA beneficiaries, that major results include the following:

- The majority of children who participate in growth monitoring and promotion (GMP) show and maintain good health and growth for their ages; they crawl and walk earlier than the children the mothers group mothers had before they began practicing these new behaviors; babies born are larger in size, stronger, and lower infant mortality;
- There is visible increased adoption of the health and nutrition practices promoted for behavior change, including the construction by the fathers of household pit latrines, food racks, hand washing ‘tip-top’ stands, rubbish pits, and better health support of their wives; mothers are telling their friends and neighbors about these benefits too, even if they are not members of a mothers group.
- A greater number of mothers are now convinced of the benefits of taking their children to the health services; and going themselves when they become pregnant, and to have their baby at the clinic;
- The majority of mothers and many fathers who participate with the MYAP are capable of preparing and daily feeding their children enriched porridges with the four food groups;
- The majority of SANA MYAP participants/beneficiaries report washing their hands during the ‘five critical moments’; washing vegetables and keeping home and courtyard clean;
- The majority of participant mothers start breastfeeding within an hour after delivery, and feed their children exclusively for the first six months.
- Both area under production and productivity (Kg/ha) and total yields have increased for MYAP households in Farmer Associations. One SANA figure here shows that between 2009 and 2012 yields per beneficiary have increased significantly (from 697 kg to over 2,075 kg.); and in the same period total area under cultivation has increased from a total of 18,412 hectares for Farmer Association members to 190,000 hectares with both quantities produced and sold also increasing dramatically. This demonstrates both increased food availability and access to food for these households. Increased incomes from sales also permits greater food security, and ability to access other food and supply needs of households.



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- Focus group households noted that the impact of the ‘hunger months’ is much less now; many said it “was finished” – they have learned how to plan better with their annual production to reserve what they need (and store) for food, what they need for next season’s seed, and what they can sell through their FA. With increased productivity, the impact on all three of these has been positive.

- The benefits of joining village savings and loan groups are very evident in learning the save and use funds for new household ventures;
- Family planning (use of injections or pills) has become highly sought after by both men and women, with both seeing clear benefits: to the mother in letting one infant grow better before the next one comes along, to the father in healthier children and less need to have sexual relations outside the home.

## Integration of Nutrition/Health and Agriculture/Marketing Components

It was not until the second year (FY 2010) of the MYAP that USAID/Mozambique began asking the MYAPs to integrate their nutrition /health components with their agriculture/marketing components. Therefore, SANA did not begin the MYAP with a strategy to link the two, but had Farmer Associations in some areas and Mothers Groups in other areas, each with their own programs and project personnel. By about the end of the second year of the MYAP, SANA had over 2,000 mothers groups, with about 1,000 Farmer Associations, and with the new USAID guidance , SANA begin to try to integrate these as best they could. Rather than trying to be sure that all 2,000 mother’s groups had exposure to agricultural themes, the program decided to be sure that the 1,000 Farmer Associations had exposure to health/nutrition messages, and where the Farmer Associations and Mothers Groups were in the same community, this process was made easier. Table 6 below shows the degree of integration by FY 2011.<sup>21</sup> Based on the more current summary Table 7 (p. 42) below , SANA has 375 Health Councils upon which their nutrition/health activities are based. This suggests that the degree of integration probably remains at about the levels suggested in the tables below, because the support structures required for these 375 Health Councils would have expended the resources available for this component of the program; it would not have been possible to extend this component’s activities to all the communities represented by the current 3,425 Farmer Associations.<sup>22</sup>

**Table 6: SANA SO 1 & SO 3 Integration (2011)\***

| Save the Children |                 |                         |                 |
|-------------------|-----------------|-------------------------|-----------------|
| Distritos         | Comunidades SO1 | Comunidades c SO1 e SO3 | % de integracao |
| Mussoril          | 65              | 31                      | 48%             |
| Ilha              | 11              | 1                       | 9%              |
| Nacala            | 22              | 10                      | 45%             |
| Mogincual         | 135             | 74                      | 55%             |
| Murrupula         | 70              | 38                      | 54%             |
| Meconta           | 39              | 25                      | 64%             |
| Mogovolas         | 229             | 70                      | 31%             |
| Moma              | 172             | 53                      | 31%             |
| Angoche           | 113             | 75                      | 66%             |
| <b>Total</b>      | <b>856</b>      | <b>377</b>              |                 |

| Africare     |                 |                         |                 |
|--------------|-----------------|-------------------------|-----------------|
| Distritos    | Comunidades SO1 | Comunidades c SO1 e SO3 | % de integracao |
| Monapo       | 21              | 6                       | 29%             |
| Nacala velha | 21              | 8                       | 38%             |
| Nacaroa      | 12              | 5                       | 42%             |
| Memba        | 13              | 8                       | 62%             |
| Erati        | 14              | 10                      | 71%             |

\* Os dados de nutricao sao de Setembro 2010 e de ag sao de Janeiro 2011

<sup>21</sup> No subsequent study has been launched in 2013 to assess if the degree of integration of these two major MYAP components has changed. SANA was the only MYAP that had even assessed this in an objective manner – though World Vision and ADRA led programs, by the nature of their integration strategies, probably were almost fully integrated.

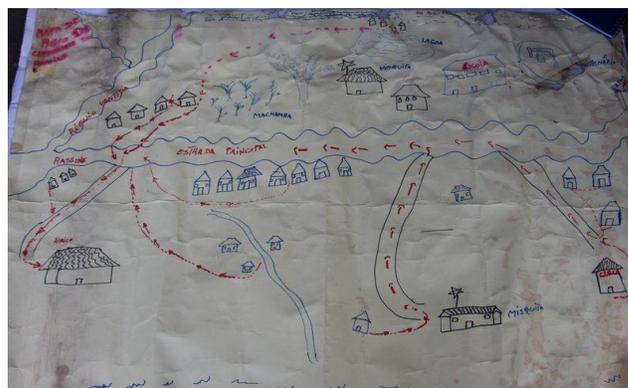
<sup>22</sup> The names that Farmer Associations give to their groups sometimes illustrates best what their aspirations are for these groups: Some of those encountered were: Let Us Lead Like This; We Used to Hear Only; What Can We Do; Let Us Finish Our Poverty; Force of Peace; First of Ma; Unity Brings Strength; Cooperative Unio; To Lack for Something with Justice; To Look for Something is Difficult; People of Poverty will be Uplifted; Wisdom of Nahips (name of community); and Come and See.

## Focus Group Interviews

The focus groups with whom the consultant met were spontaneous and vocal about the benefits they had received through the past five years and some of these benefits are noted below. At many gatherings, demonstrations were given on how specific messages were communicated to community members – shown through charts summarizing Farmer Association and Forum annual production and marketing goals (and what was actually realized), seasonal food crops displayed in ‘the four food’ baskets, miniature bridges to illustrate the two dangerous bridges that a child must cross before it is five years of age, and a clay miniature ‘house’ symbolizing the body of a child and how it develops.

## Community Resilience (Disaster Preparedness)

Within each community receiving this kind of assistance, significant MYAP effort was given to encourage community members to select those men and women whom they trusted, respected and considered capable of undertaking these volunteer activities on their behalf. The men and women encountered by the consultant in focus group meetings certainly provided the impression that these were serious and committed individuals who were proud of the role they were given within their communities. Many of the committee positions had a male and female assigned to the task to support each other. As part of their pre-emergency preparations, a map is created of the community showing likely directions from which some disasters may approach (cyclone, flooding), the best roads/trails to take to evacuate to higher ground or the location of ‘safe places’, buildings constructed of cement which afford the greatest amount of protection in case of high winds, flooding, and located on high ground.



The SANA group met in Nacala Velha region was no exception. The “Emergency Committee” as they called themselves had a membership of 18 members who were responsible to assist their community of about 1,016 individuals:

- There was a male community coordinator and a male vice-coordinator (who acts when coordinator may not be present. The vice-coordinator was in our focus group meeting. The role of this position is to call the community together for emergency meetings, and to coordinate the activities of the other members of the committee, meeting with them on a regular basis.
- Two individual (one male, one female) who keep the key to the large box (provided by the MYAP with required equipment/tools for emergencies within it.<sup>23</sup> The man keeps the key; if he should be away from the community, he will give the key to the alternate person for this task;
- Three individuals (male) responsible for search and rescue, and helping people if something were to happen; special attention is given to children, mothers with young children or pregnant, and other vulnerable people;
- Three individuals (one male, two female) who are trained to direct community members to safe places; when they are in these places, they also care for their needs while there, feeding them if necessary. There are four ‘safe places’ that have been designated within this community (cement houses – a mosque, church, school building); the individuals are responsible for different areas within the community.

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<sup>23</sup> This box, which the committee wanted to show me, was large and heavy, made of hard wood, and contained orange vests for all committee members, two life vests, pairs of rubber boots for all members, shovels, two radios, two megaphones, red, yellow, and green flags (to be attached to long sticks). A couple bicycles are also provided to group. At one meeting with a World Vision emergency committee, all members had put on the orange vests for our meeting. In this in-land community, the community was in a region subject to very serious flooding when heavy rains are experienced. Their ‘search and rescue people’ spoke of having to go out in small wooden canoes to rescue people stranded on little islands who were in very real danger of being attacked by crocodiles and hippos (people had been lost in past in this way).

- Two individuals (one male, one female) who run throughout their allotted area of the community announcing the coming of an ‘emergency event’ – carrying different colored flags that indicate the degree of danger at that moment. They both carry a megaphone, and may be announcing the imminent arrival of a cyclone, or flooding.
- Two individuals (one male, one female) who are charged to document what took place during the emergency event – who was effected, the nature of damage that may have occurred, etc. This is given to the government authorities who oversee this program (INGC).
- Two individuals (one male, one female) each of whom has a program provided radio that they monitor the news and forecasts for their area (concerning cyclones, major storm events, flooding, fires...).
- Two individuals (one male, one female) each of whom help to mobilize community members during an emergency event – moving people along to the shelters, searching that young children and invalids are given assistance and aid if needed.

This particular community was selected for assistance because of their close proximity to the sea, and an area that historically has experienced great destruction from cyclones and major storms in the past. The last major catastrophe was the 1994 cyclone which left no house standing in the community. Since their creation as a committee in 2010, they have not experienced any major ‘emergency event’. But, they do step in as a group to help their community in stressful times. In 2010 a bridge went out from flooding, with downed trees blocking two bridges: they helped to clear the tree and other debris away. When, with heavy rain, they see water blockage and possible flooding, they clear debris away or dig ditches to drain water away. A house that caught on fire drew them together to help the owner remove valuable property, and then helped to assure the family had sufficient food and clothing needs until they could be back on their feet again.

Why, I asked, is what they are doing considered important? The response was that they help their community to solve its problems. They encourage community members to register their children at the local clinic. They have formed their own savings and loan group so as to have some money to help community members in these emergency events<sup>24</sup>.

### 2.2.2 Lessons Learned<sup>25</sup>

- **Promote One Enriched Porridge Recipe**  
“In nutrition, the component moved from promoting multiple enriched porridges to promotion of just one that includes all recommended food groups thus reducing confusion and preparation time while increasing nutritional value (SANA 2012 Results Report).
- **The Need for Stronger Monitoring**  
“Although M&E systems for development programs continue to receive increased attention and resources, it is still common to find situations where programs could provide, not only more accurate and timely information, but also additional data to demonstrate coverage, impact and additional learning. A specific case within SANA is the collection of data from the production and marketing plans of the programs over 3,400 associations. In spite of our extensive efforts our M&E budget and staffing were insufficient to consistently capture information from every single group and, therefore, we are not able to accurately measure increases in the crops promoted by the program. Future programs with large population and geographic coverages like SANA’s will need to substantially increase the level of resources available to capture critical information or resort to spot checking methodologies to at least project more accurately the results of development efforts” (SANA 2012 Results Report).
- **Patience and Persistence pay Great Dividends**  
“The initial LOA for the SANA program was three years. Such a short period for the implementation of such an ambitious activity plan and population coverage forced SANA staff to rush to and through many areas. Building

<sup>24</sup> There was no farmer association or community health council in this community; however, in other SANA sites for these emergency communities, there may be a health committee but no farmer association, or there may be a farmer association but no health committee.

<sup>25</sup> Most of these are taken directly from SANA 2011 and 2012 results reports (shown in quotes) and others were communicated directly to the consultant.

trust takes time and thus those areas that required a significant level of trust among the participants did not move as quickly as planned. Producers and buyers did not trust each other therefore linkages between these two groups were weak. Additionally, farmers did not trust other farmers and were reluctant, for example, to bring their produce to a central place and leave it there under the care of another member to be sold later. If the program had ended at the end of Year 3, the opportunity to develop trust among key players would have been lost. Year 4 has shown an impressive increase in the level of trust among all SANA participants. As a result, activities where this is a key component, i.e., contract farming, and cooperatives and forums selling large volumes of produce, signing contracts with commercial entities and successfully operating community seed banks were more abundant in Year 4” (SANA 2012 Results Report).

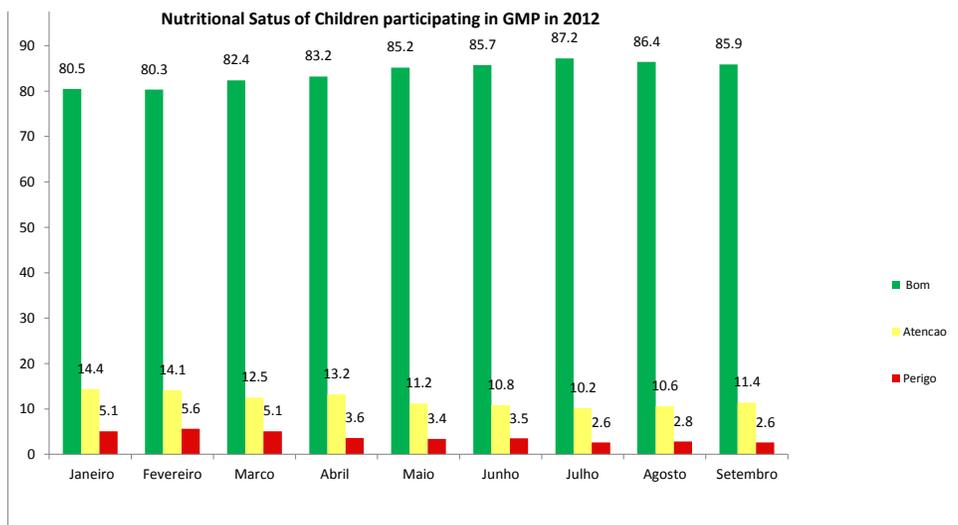
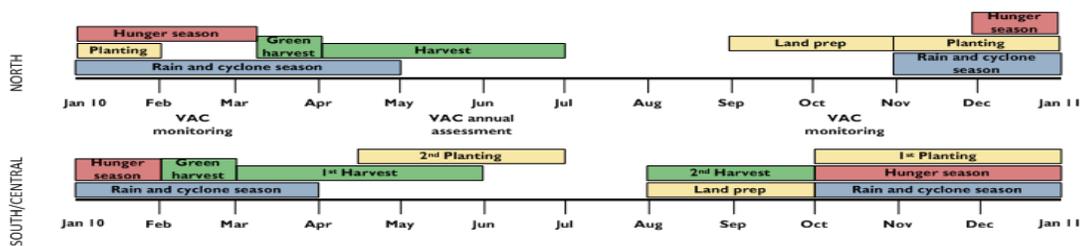
- **Innovation, like Excellence, is not an Action, it is a Habit**

“There is always room for innovation. The organization of forums and cooperatives was not part of the SO1 plan but were added when the opportunity arose. Child protection measures during emergencies were added to the training curriculum of the Local Disaster Risk Management Committees along with mini-simulations as part of the standard training of INGC although they were not part of the original proposal. Training of LDRMCs in village savings and loans to demonstrate a mitigation measure increased group cohesion and sustainability and is now being adopted by other players... More nutrition volunteers are using local means of promoting good practices via songs, plays and baskets of available products rather than depending on materials developed outside the community. And moringa, a tree that grows widely in the area but was only thought of as food for hunger seasons, has been moved to center stage given its rich content of multiple micronutrients and protein. This sampling gives an idea of the need for, and value of openness to innovation throughout the life of a program” SANA 2012 Results Report.

- **Hunger Seasons and Malnutrition**

There does appear to be objective evidence of some correlation between hunger season months (November – March) and the number of children found to be malnourished or severely malnourished. Data presented by SANA on growth monitoring, when linked to calendar months below, appears to suggested greater frequency of malnutrition during the hunger months; however it is also evident that malnutrition is a problem throughout the year as well. Similar data from all four MYAPs are presented in Annex 8.

## Seasonal Calendar and Critical Events Timeline



- **The Gender Gap**

Significant progress has been made in reducing the gender gap in agriculture and nutrition, but there appears to be a point where this can have detrimental effects. *“Pushing for higher level (women’s participation) could work against the health/nutrition recommended practice of reducing the workload of women during the last six months of pregnancy and during the first six months of lactation. SANA considers that this workload reduction will have a higher level of impact on the nutritional status of children than having these mothers involved in agricultural activities”*<sup>26</sup>.

## 2.2.3 Best Practices

### Nutrition & Health Best Practices

#### (1) SANA’s Health Extension Methodology:

SANAs approach to reaching target community mothers and fathers with nutrition/health, hygiene and sanitation messages must be considered a best practice. Several factors seem to stand out:

- **Community Nutrition Support Groups:** SANA initially built up over 2,570 Community Nutrition Support Groups (CNSG) to mobilize and support the volunteer leaders in their community.
- **Health and Nutrition Promoters** would also be considered local volunteers, as they received only a small stipend to cover some costs, but were not full-time paid employees; Each of the 257 trained community Health and Nutrition Promoter helped SANA to identify and eventually train within their communities (with the help of the CNSG) 10 women leaders (*animadoras*) for what would become the community mother groups.
- **Health and Nutrition Animators/Animadoras:** SANA volunteers included both agriculture focused ones (working with farmer associations) and nutrition-health focused ones (*animadoras*); The 2,570 trained *animadoras* are guided technically by a structure within the SANA program beginning with project health coordinator with district level health technicians, who themselves worked to train and guide the community based health promoters. The health and nutrition animators initially helped to organize and train 2 mother groups of 15 women each; currently this has been expanded to 4 mother groups each of 20 women each.<sup>27</sup>
- **Mother Groups:** These included pregnant and lactating mothers, and mothers with children under two years of age. Mothers of children between 2 and 5 years were also included. SANA mother groups currently consists of between 15 - 20 mothers each. SANA has 8,310 mother groups (some of which also include fathers)! There are about 205,175 women in these groups,<sup>28</sup> and at least 25,924 fathers. Groups meet twice each month.
- **SANA Training Materials:** The training of community nutrition (and agriculture) promoters who each were responsible for 10 volunteer health and nutrition *animadoras* was built on excellent training materials developed over years of experience through the DAPs and which kept evolving through this MYAP.<sup>29</sup>

#### (2) Mothers Groups

The creation of the mothers groups, led by the local volunteer health and nutrition *animadoras* has been a strong factor in the success of reaching many households with children under 5 (with focus of under 2) with nutrition/health/sanitation and hygiene messages; some of which have resulted in great change in behaviors. The most frequently mentioned changes:

- **Pregnancy:** household expected labor has been reduced for pregnant women nearing delivery time, with rest breaks in the afternoon – particularly in 7<sup>th</sup>, 8<sup>th</sup>, and 9<sup>th</sup> months. Carrying of heavy loads and working long hours in household fields has been reduced at this time. Expectant mothers now go to the local government clinic to

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<sup>26</sup> SANA Fiscal Year 2012 Pipeline and Resource Estimate Proposal Guidance, October 2011, p. 4

<sup>27</sup> One *animadora* met had 6 mother groups under her care, two of 15 women, and the latter four of 20 women each. Some mother groups also had begun to attract more than 20 women.

<sup>28</sup> Most of these were mothers, but women without children could also be part of these groups, being also influential in communicating appropriate behavioral messages.

<sup>29</sup> The SANA program developed a short brochure listing (with illustrations) the 18 health and nutrition practices being promoted by the program. All 12,850 CNSG received training on the use and follow up for the brochure and have become a strong driving force to reduce malnutrition in their communities.

be checked over for the pregnancy and receive council. They also begin to eat a more balanced diet of the 4 food groups, and the husband helps to make this possible.

- First Six Months & Exclusive Breastfeeding: First milk of mother (colostrum) is now given to infant right away, instead of giving child to another nursing mother the first days, and removing the colostrum – once thought as ‘bad milk’; then exclusive breastfeeding for first six months (no water, liquid supplements, porridge, etc. which was frequently the case before). Mothers knew that exclusive breastfeeding gives children special immunity to some diseases, resulting in better health, less diarrhea, etc.
- Six months to 2 years: Continued breastfeeding, and beginning to supplement baby’s food with nutritious porridge (with 4 food groups in it); mother also eating well, drinking plenty of clean water.
- Hygiene: washing of breast before feeding baby, washing of baby’s cloths, and others clothes to keep clean, washing of hands, keeping water clean and boiling water consumed, or use chlorine tablets if can purchase them; construction of latrines (with ashes), keeping them covered to control flies, remove standing water because of mosquitos, use of bed nets, particularly for young children;
- Reduction of Incidence of Diarrhea: With the above changes and prevention strategies, there has been a dramatic reduction in infant and young child diarrhea noted by beneficiaries.
- Two Bridges & First 1,000 Days: An innovate and very effective way to explain to mothers that the first 1000 days of a child’s life were the most dangerous, with the ‘first bridge’ to cross being the most risky, poorly constructed (between conception through child’s birth and its first two years). During this time, the child faces the most serious risks to their long term development and health, and risk of death. The ‘second bridge’ (two years to five years) is a bit stronger, but still needs special care for the child to be will launched into life.
- Enriched Porridge, the Four Food Baskets & Song: The use of the ‘four food baskets’ [foods for (1) growth; (2) energy; (3) growth, and (4) high energy] that the feeding child (six months supplemental and older) needs (as well as mother) on a regular basis to be healthy and grow well was mentioned by all focus groups. This is served as a special enriched porridge, given several times a day to young child. SANA groups sing the ‘nutrition food song’ as well which lists these out one by one. Here mothers learn what kind of foods fit into these four baskets on a seasonal basis, and how to prepare dried/powdered moringa leaves and other products (ground peanuts or soybeans, processed bitter manioc flour, sesame oil, sugar, orange sweet potato) for adding to this mix, to have accessible for these enriched porridge meals. The result is very tasty.<sup>30</sup> Also, rather than promoting a variety of different porridges “*each enriched with only one or two of the recommended food groups*”, SAVE found that promotion (for infants over six months and young children) of “*one enriched porridge (recipe) that contains all four types of foods recommended in Mozambique’s national nutrition guidelines*” was more effective towards adoption and less confusing to mothers.
- Family Planning: This has become much more widespread and sought for (pills or injections); A community best practice includes the ability of a community health promoter being able to pick up prescriptions for a group of women (once they are registered for this service); it is not therefore necessary for each person to take the time and make a possibly long trip to a distant health clinic to pick up the needed pills. The bigger constraint here is the clinic running out of supplies.
- Fathers: Father’s behaviors have been modified through listening to their wives about what they have learned or sitting in themselves to mothers group training sessions; this has led to what one woman described as the MYAP “*has helped to shape men – to develop good behavior of men to their wives and children*”. Women not say they feel “equal” to men in their roles within the household.

All the above seem to have been well taught and adopted as practice by most of the beneficiary mothers.

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<sup>30</sup> Fruit, milk and eggs are now frequently purchased to supplement mother and young children’s diet; fathers give their children chicken livers, which they used to consume themselves; households have learned how to prepare bitter manioc flour for consumption in one day – something that was either not used at all, or took much longer to prepare; peanuts used to be sold as cash crop, but not peanuts are understood to be an important growth food that young children need to consume with regularity (so is ground and added to enriched porridge).

### **(3) Community-Based Growth Monitoring & Promotion (GMP)**

Monthly GMP sessions<sup>31</sup> with groups of mothers in the 500 communities the MYAP worked in proved to have a dramatic impact on parents of the under five children being weighed – with priority given to the under two. This proved to be the important link between the learning sessions held twice a month with mothers groups with practical demonstrations of nutritious meal preparations, hygiene/sanitation habits, and child feeding practices and the GMP weighing sessions themselves. Mothers began to visibly see objective evidence of when a child might be ‘at risk’ by the weighings and the results for these children when they followed volunteer health animators teachings.

### **(4) Moringa (Moringa Oleifera – the ‘Miracle Tree’):**

One of the most successful and important ingredients of the enriched porridge promoted was moringa. As the MYAP noted: *“Moringa trees are widely available and frequently used for fencing but were only regarded as a food during times of scarcity. That perception has dramatically changed and moringa leaves are increasingly becoming part of the daily diet of SANA communities. A nutrition indigenous plant, moringa (Moringa Oleifera – the ‘Miracle Tree’) contains more Vitamin A than carrots, more calcium than milk, more Vitamin C than oranges, more potassium than bananas and many other beneficial properties.”*<sup>32</sup>

## **Agricultural Productivity & Marketing Best Practices**

During focus group interviews with both farmer associations and mothers groups, certain themes were repeatedly mentioned as having had an impact on program beneficiaries. These included:

- How to care for their fields to prevent soil erosion and increase fertility naturally (through organic decomposition, no burning);
- Planting in lines, number of seeds per pocket (with thinning) and no burning of weeds but using these as green manure, with crop rotations;
- Households say that higher plant density and new combinations of plants planted together (sesame with maize for example), and greater diversity within one field is clearly producing greater production, leading to more food in the household and more to sell as well.
- Numerous Farmer Associations, some of which have coalesced into forums to facilitate the bulking/aggregation and sale of their commodities to regional traders; this has permitted being able to negotiate for better prices (traders save time not having to go around purchasing small quantities directly from farmers or purchase at markets); Each SANA agricultural promoter helped to create 10 farmer associations through which this technical support was provided, and farmers have greatly appreciated this support;
- Even community farmers who may not be a member of a Farmer Association still benefit from presence of the FA, as they are able to directly sell their excess crops through the FA, while FA members who are part of a forum will wait for payment until their sale goes through with a regional buyer (after consolidation) to be paid;
- The use of hermitically sealed special plastic bags (\$2/bag) is showing great promise for the storing of seed materials – as long as the seed is properly dried before storage. Those receiving the steel (FAO promoted) silos were particularly pleased, and many wish to purchase these themselves (for about \$300). The improved Gorongosa traditional silos were very much appreciated as well;
- The processing of bitter cassava in one day, something that used to take a week or more – making food available within a day for household children;

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<sup>31</sup> GMP was strongly encouraged within the MYAP by USAID/Mozambique in 2011 and quickly became a very popular and greatly appreciated activity among the mother groups worked with throughout all 4 MYAPs. One observation made by the consultant however was that beneficiary women do not understand how to interpret the growth charts for their children – even some of the local community health technicians could not do so.

<sup>32</sup> Save the Children Fiscal year 2012 Pipeline and Resource Estimate Proposal, October 31, 2011, p. 4

- New varieties of crops (groundnuts, bitter cassava, Mung beans, soybeans) which helps to diversify household crop production;
- Some 100 farmer groups received sprayers from SANA to spray for insect control for many of their crops (cowpeas, soybeans, sesame, cotton, Mung beans) using organic insecticides (and how to carefully use the chemical sprays, if used); also greatly appreciated and a demand has been created for more;
- Improved ways to store seed needs for coming season (e.g. hermetically sealed bags) and improved traditional silos
- Improved household ability to allocate annual harvests towards household needs for food, seed, and sales, and even have production plans. This has extended into links with groups like IITA and others for local production of new seed stocks for improved crop varieties;
- With increased incomes from increased sales through Farmer Associations and Forums, farmers are able to hire labor to increase the size of their farms so that they can produce more in coming years;
- Farmer Associations and Forums training in how to develop production and business plans, and then how to negotiate with traders for best prices was also seen as a valuable learning experience.

## 2.3 OCLUVELA MYAP (World Vision): Lessons Learned, Best Practices & Successful Strategies

### 2.3.1 Background

According to its MYAP proposal, OCLUVELA (meaning 'hope') proposed to work in **8** of the most vulnerable districts of Zambezia Province: Alto Molocue, Gile, Gurue, Namacurra, Namarroi, Nicoadala, Mopeia and Morrumbala. *“Zambezia was ranked the worst province by the 2006 UN report on Childhood poverty in Mozambique, with an estimated 75% of children living in absolute poverty. According to the UN report, Zambezia province also has the highest percentage of children with severe health deprivation, at 34%. Stunting rates are above the national average at 47%<sup>33</sup>. Considering the large population, the absolute number of children in need of support is enormous.”<sup>34</sup>*

World Vision’s program in Zambezia Province is split into a northern region and southern region, with ADRA’s programs in the middle. WV works among some 333 Farmer Associations (with about 25 members each) that overlap with 330 Community Health Councils, usually meeting in the FA meeting house. Clearly one of the strengths of this MYAP program has been the organization of these **community based leadership groups**, many of which have been in existence since the WV DAP 1 beginning in **1997**, and DAP 2 years – beginning in October 2002 - prior to the beginning of the MYAP. As noted in the 2008 DAP 2 final evaluation report, OVATA (i.e. DAP 2) built on DAP 1 to *“increase the level of production and improve access to lucrative markets... and the integration of nutrition and road components of the project was important in the area of agriculture.”<sup>35</sup>*

The DAPs were organized around Farmer Associations with agricultural and marketing focused activities, and Health/Nutrition programs working with different groups of people, sometimes in completely different localities. Yet it was in these DAPs that World Vision began to lay the foundation of what became a major operational strategy in the MYAP. For example, in the 2008 DAP 2 final evaluation, it was stated that *“some nutrition and HIV/AIDS community councils are also farmer associations”* and that *“these community councils that fully benefit from both components were much more likely to have money generating initiatives in place, which significantly increases their chances of continuing to work in the future”*. The recommendation was then made that *“the nutrition and HIV/AIDS and agricultural programs need to reinforce their collaboration by providing dual training to both health trainers and agricultural extension in order to increase the overall impact and support long term sustainability of the program.”<sup>36</sup>*

However, the World Vision MYAP was not initially intentionally written to integrate agriculture among the FA’s supported with the nutrition & health activities; this began to happen in the second year of the program (2010) and was based upon USAID guidance to do so. The strategy then used was to link the Community Health Councils (CHCs), with its sub-groups, to each of the existing Farmer Associations. This integration did take place, and most of those interviewed during the consultant’ site visits were direct beneficiaries of both programs illustrating strong integration of these two MYAP priorities.

Through the Farmer Associations, WV agricultural and marketing technicians continued to build farmers understanding and use of a wide range of improved practices (planting in rows, conservation tillage which included not burning uprooted weeds in the field, planting densities, crop rotations, etc.). Each member of a World Vision FA is supposed to have a satellite group of at least three additional community households (who are not members of the FA to whom they extend what they have been learning about increasing agricultural production. These households can also benefit by selling their extra production through the FA, if they wish. This practice has permitted the MYAP to extend the impact of the program into the larger population within

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<sup>33</sup> DHS 2003

<sup>34</sup> World Vision MYAP P.L. 480 proposal, August 15, 2008

<sup>35</sup> World Vision Mozambique OVATA DAP II Final Evaluation, 2008, p. ii

<sup>36</sup> World Vision Mozambique OVATA DAP II Final Evaluation, 2008, p. 4

each community. Indeed, one might also say that the World Vision MYAP seemed to be too broad and included too many themes and agricultural programs, to the extent that there appears to be no specific focus among the agricultural activities. World Vision stated that maize and cowpeas were the main value chain crops focused upon, but the project also monitored cassava grown by all households, and the data tables (cf. Annex 8) on aggregated commodity sales also includes groundnuts, sesame, soybeans, pigeon pea, tomatoes – without mention of cowpeas. The purchase and distribution of pairs of oxen for draft power and use of these for transportation of produce to markets was another endeavor which, though important, did not reportedly accomplish the objectives anticipated.

World Vision has a completely different strategy to communicating its health/nutrition activities – when compared to that of FH and SANA MYAPs. Though not specifically discussed in their annual results report, the WV approach to communicating their health/nutrition messages was based on an approach that created and trained community health volunteers (CHV) in Health Councils attached to most Farmer Associations. Membership in a Farmer Associations is not always exactly the same membership as their Community Health Council, but all the members of the CHC are members of the FA. This became World Vision’s primary means of integrating agricultural and health/nutrition interventions. These Community Health Councils are made up of 15 – 20 or more members – all volunteers - made up of three major sub-categories of individuals (besides HC leadership, president, secretary):<sup>37</sup>

- Community Health Volunteers (CHVs) (men and women)(10-15 volunteers in groups met);
- A mothers/fathers group (many such groups only have women, and many only a couple men)(5-10 mothers/fathers in groups met);
- Councilors (respected members of the community, usually older men/women who help iron out issues or meet with community households or individuals when MYAP personnel or HC or FA members are having problems with some individuals (1-8 members in groups met).

Community Health Volunteers (CHVs) are responsible to take messages that both the WV Agricultural Technician and Health Technician (or their auxiliary) give to them at regular meetings, and go to visit community members to see if they understand these and are applying them.<sup>38</sup> They cover a broad range of themes with the communities. What, I wondered, was the difference between these CHC volunteers and the CHC ‘mothers/fathers group’. I was told that members of this small CHC sub-group are more hands-on focused with specific critical households. They will individually or as sub-groups visit households to **follow up on children that are believed to be under-nourished** to see if mothers are following training themes, and also lead in the actual demonstrations at the ‘community gathering place’ on how to prepare food from ‘the four food groups’ into an enriched porridge, and how to process some of the local foods (moringa, sesame, soybeans). The councilors provide back-up support to the other two groups, as well as MYAP personnel in the area. There are NO actual mother’s groups in the sense of SAVE or FH, no ‘Animadoras’ who lead mother’s groups, and no Health Promoters who lead and train the Animadoras.

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<sup>37</sup> The number of volunteer participants in these sub-groups varied greatly from one Community Health Council to another – permitting flexibility to the members to choose as they wished for these roles.

<sup>38</sup> During our interviews, the consultant asked these CHC volunteers to describe what they do. Their responses from group to group were almost always the same. Each volunteer’s primary task is to visit, **twice each week, a group of 15 households** within their community to encourage them in the nutrition/health and agricultural training they have received. Key tasks: exclusive breastfeed for the under 6 months, and continued breastfeeding through 2 years; encourage pregnant women encountered to go to health clinic to begin regular checkups; if undernourished children are encountered, either recommend better feeding practices through enriched porridge or send to health clinic if looks severe; in some cases health volunteers even use their own savings and loan money to help send mother to clinic if she cannot afford it; during visits, volunteers inspect yards of homes and encourage rubbish into pits, and keeping houses inside swept clean to prevent illnesses; encourage home latrines if these do not exist and encourage husband to dig these; look at how household uses water for drinking, or how household utensils are washed and dried (and encourage construction of dish racks for drying and keeping away from animals); inform household of dangers of standing water and mosquitos, and encourage use of nets; cover and purify water before drinking with chlorine or boiling.

### 2.3.2 Lessons Learned<sup>39</sup>

- Ocluvella learned through visits to the Osanzaya MYAP that ‘it was critical to develop a community-led monitoring mechanism that allows different intervention groups to monitor their own progress and thereby feed into the program level M&E system’. A stumbling block to success of farmers associations, unions, and cooperatives is often lack of transparency in use of finances with members and such transparency must be encouraged.
- More efforts need to be exerted on the part of project field staff to encourage and ensure that the farmer association members take increasing responsibilities in doing all of their production and marketing activities themselves. Without this, sustainability cannot be expected to occur.
- Instead of making formal relationships between interested private sector parties and World Vision, Ocluva should encourage direct contracting with the legalized farmer associations, such as with seed suppliers, and emerging food processing companies. Again, without this, sustainability cannot be expected. An example of this was farmer expressed desires to purchase, themselves, the FAO introduced metal silos. But they did not know where to obtain these.
- The factors that motivated farmer associations to become legalized were the presence of funding opportunities from government and the private sector and the linkages with markets for their crops. Understanding these motivating factors enabled Ocluvella staff to encourage farmer associations to pursue legalization.
- Financial management, technical capacity, and leadership abilities are major obstacles to graduate strong associations into cooperatives. This would also certainly include literacy.
- A major gap in increasing farmer productivity is the inability of markets to address agricultural inputs, such as seed supply needs of farmers.
- Ocluvella experienced best results when there was full engagement with local communities, and good coordination with other programs within the region and district. This was certainly true with respect to the GoM Instituto Nacional de Gestao de Calamidade (INGC) for the preparation of community disaster preparedness plans and monitoring of early warning systems to predict disasters, but was also true with respect to linking with GoM for mobile health clinics and promotion of messages over the radio, and the Ministry of Agriculture market price data. One of the DAP 2 lessons learned was that *“it is essential that programs intervening in the same community have a high level of collaboration and coordination, or the potential resulting synergies may be negative instead of positive”*.<sup>40</sup> This lesson, and many others of these DAPs, reinforced WV MYAP activities, and permitted a strong working relationship to develop between another USAID program (SCIP) working on institutional strengthening within World Vision targeted communities.

### 2.3.3 Best Practices

#### (1) Integration: Community Health Councils & Farmer Associations:

World Vision implemented its agricultural and nutrition/health components through farmer associations and health councils. In each location where WV had activities, farmer associations/health councils represented essentially the same group of about 25 people, resulting in close integration of both major strategic objectives of the program.<sup>41</sup> WV has estimated that about 25% of



<sup>39</sup> These responses are taken from FY Annual Results Repots, as well as direct responses of program technical leaders to the consultant’s questions on this issue.

<sup>40</sup> World Vision Mozambique DAP 2 Final Evaluation, 2008, p. 3

<sup>41</sup> In the discussions with members of the community, it became apparent that membership in the WV supported Farmer Association in each community is limited to those 25 or so original members. There are many other households within many of these communities who are NOT members, but who would like to be a member of a FA. New FA’s are created, but the MYAP (and DAPs before them) seem to have tended to remain with the original members of the FA’s established, in a process to strengthen them. This is not to say that other households in a community do not benefit by the FA in their midst (they do, and can sell produce through the FA), but this is not the same as being a member of the FA itself. I had people ask *“can I be a member of the FA too?”*

households that were directly linked through the health councils on nutrition issues also participated directly through their community farmer associations. In the Inhanhane community visited in Ile District, I met under the Farmer Association's meeting shelter shown here. The Farmer Association had 30 members (18 men, 12 women), and the mostly overlapping Health Council had 25 members (13 men, 12 women). After discussions with them, they produced their 2011 and 2012 FA crop production plans. On these they had planned (as a group) to produce for sale each year for four major commodities, what was actually produced, what they intended to sell, the amount earned/kg, and total sales per commodity.

**(2) Metal Silos and Improved Gorongosa Improved Silos:** Beneficiaries in the two districts receiving them (Gurue and Alto Molocue) pointed out that the 200 metal silos introduced were extremely valuable assets for those receiving them, to the extent that many successful farmer households are seeking to purchase these themselves. Elsewhere, the introduction and use of 216 improved Gorongosa improved traditional silos was also very well received and is likely to become more widespread.

### **(3) Legalized Farmer Associations and Forums**

Significant efforts were made in assisting 308 (of 333) farmer associations to become legally registered by the GoM and then grouping some of these into 44 forums.<sup>42</sup> The strategies used by the program, built upon lessons learned through earlier DAP efforts, served the MYAP well and provide a foundation for continued expansion.

### **(4) Regional Market Linkages**

Significant efforts were also made to improve the linkages between the farmer associations and their forums with regional traders and the World Food Program for bulk commercialization. Registered sales through the end of the MYAP include:

- \$526,356 from 3,856 MT of maize
- \$92,904 from 632 MT of pidgeon pea
- \$60,653 from 1,900 MT of soybeans
- \$26,194 from 991 MT of groundnuts
- \$15,479 from 958 MT of sesame
- And \$14,512 from 4,471 MT of tomato

The ability for forums and cooperatives to sell maize to the WFP is a major achievement of the MYAP and will certainly be critical to the short-term commercial success of these Zambezia community groups. This ability will serve these groups well as they seek and continue to learn to negotiate with other regional and export orientated buyers in terms of volumes and quality of product. The support in increased production and marketing of a number of these commodities has also had a very important additional impact on nutrition at the farmer household level. Tomato production was an off-season crop and also provided additional nutritious foods; learning how to process soybeans and sesame at the household levels, and the importance of these, including groundnuts, within the four food-groups for nutritious porridge for developing children has also linked production to improved infant and household nutrition in general.

### **(5) Community Health Council Volunteers**

The 10,027 community volunteers that have been trained during this MYAP through the 330 CHCs to pass their training in agriculture and health/nutrition on to community members represents a very important achievement in itself, and foundation for continued local community advancement in the years to come. One observation made at the end of the Ovata DAP II program was that there was a need *"to review and develop a*

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<sup>42</sup> Why World Vision created 'forums' and not unions, as ADRA did, is not clear, as forums do not exist as legal entities/groupings within Mozambique, while unions do. ADRA has assisted its unions to become themselves legally recognized, but World Vision has not done this with its forums.

*sustainable system for volunteer incentives – in coordination with other organizations – to reduce high volunteer turnover*”.<sup>43</sup> While CHC volunteers certainly gain community favor and recognition for what they are doing, it remains clear that this recommendation continues to be a challenge that needs serious attention. The services provided by these volunteers cannot be under-estimated and deserves attention to seek creative non-financial means of recognition. This might be in the form of greater delegated responsibilities (e.g. literacy training, or the right to weigh and register data on infant growth monitoring chart development, perhaps some special symbol of their special volunteer status (special colored head cloth or scarf), etc.<sup>44</sup>

### (6) Distribution of Household Production over Year

A challenge at the end of the WV DAP II was the need to “*incorporate messages on the importance of equitable food distribution inside the household, which targets men and heads of households*”. The MYAP, through the CHC volunteers was successful in helping households to understand the need to divide household production into three separate, but clear, categories: seed for the next season, household consumption needs, and household sales of commodities within their farmer association and elsewhere. Then the MYAP assisted in helping households to preserve that seed for the new agricultural season, how to store their household consumption needs in improved silos to reduce loss to insects, and then how to plan, through their farmer associations, specific goals for commercial crops (e.g. increased farm hectares) and seeking bulk buyers for these to achieve improved per kilogram increased prices. The overall result has been increased yields of all crops cultivated and increased incomes at the household levels permitting the kind of food rationing required for food security through the hunger months of every year. One should not expect to find World Vision farmer association beneficiaries among those who continue to dread the hunger season, as most have become food secure.

### (7) Growth Monitoring of Children under 5 Years

As observed among the other MYAPs, households considered the activity of monthly growth monitoring of their children as particularly important, and mentioned it frequently during discussions. This has proved a key means of detecting malnourished children (weight for age) **before** they develop the more serious visible symptoms of swollen bellies, reddish hair, or stunting and wasting. Knowing there may be a potential problem developing, the health volunteer doing the growth monitoring can advise the mother concerning improving the child’s dietary intake, and also refer someone from the CHC mothers/fathers group to pay a visit to this household to help evaluate the situation and provide guidance on what the parents might do to improve this situation.

World Vision records indicate that by the end of the MYAP, some 17,643 children two years or younger were being weighed each month; during these weighing sessions, children between the ages of 2 and 5 years were also measured if mothers brought them forward. The photograph shows 2012 records for weighing of children under 5 years from Inhanhane community in the Ile district visited; it illustrates the frequent variability from month to month of the children actually weighed, and the fact that malnourished children exist throughout the year, while severely malnourished children also showed up with surprising frequency – in spite of technical advance being provided through the community’s Health Council volunteers.

| MÊSES    | CRIANÇAS PESADAS | CRIANÇAS DE 2 ANOS A 5 ANOS | LACTANTES EM ATIVIDADE | CRIANÇAS POR MAIS |
|----------|------------------|-----------------------------|------------------------|-------------------|
| ABRIL    | 33               | 06                          | 2                      | 25                |
| MAIO     | 44               | 6                           | 9                      | 29                |
| JUNHO    | 42               | 2                           | 12                     | 28                |
| JULHO    | 26               | 2                           | 7                      | 17                |
| AGO      | 39               | 5                           | 9                      | 25                |
| SETEMBRO | 26               | 4                           | 5                      | 17                |
| OUTUBRO  | 19               | 1                           | 2                      | 11                |
| NOVEMBRO | 36               | 1                           | 8                      | 27                |
| DEZEMBRO | 34               | -                           | 4                      | 30                |

<sup>43</sup> World Vision Mozambique Ovata DAP II final evaluation, 2008, p. 4

<sup>44</sup> SANA noted, for example, that sometimes the Community Health Councils would organize a group of people to weed a field of their animadoras as a gesture of appreciation for the time these volunteers were giving to assist the community.

## **(8) Behavioral Changes**

Some major changes have taken place in recent years – most in respect to care for and nutrition of young children. Groups interviewed included many women with between 4 and 12 children each! What did they see as the biggest changes from when they had their first children? Answers from various groups were fairly consistent here: We used to give our babies water or fed them gruel – now we only give exclusive breast feeding for babies when less than six months of age, and continue for two years. The ‘first milk’ (colostrum) was considered dangerous and babies were given to another mother at birth to feed until ‘real milk’ would come. Now they recognize just how important that ‘first milk’ is, and the old practice no longer exists. Also the way porridge is prepared for their young children are very different.

It used to be that simple maize porridge was given to small children – the same food the rest of the family was eating that day. But now, mothers realize that infants and young children need more nourishment than this, and have been taught how to enrich the child’s porridge with seasonally available produce from the four food groups. The basic cereal (porridge) is mixed with ground peanuts, an egg if possible, ground fish powder, dried green crushed Moringa leaves, some sugar if possible, and oil).<sup>45</sup> Moringa, in particular has been a spectacular success and is not cultivated everywhere; its leaves, dried and powdered, can be found in many households today.<sup>46</sup> In the past, children were not vaccinated; now they are. In the past orange-fleshed sweet potatoes were not considered good for children (even dangerous), now this is something mothers seek to give their children.



## **(9) Community Resilience in Disaster Prone Areas**

Ocluvella established 12 community resilience groups in collaboration with the GoM Department of Disaster management Affairs (INGC), using a methodology which appears to be building strong community support in areas most prone to natural disasters (e.g. extensive flooding, cyclones along the coast). Though small in number, this is part of a larger national program in which the other MYAPs have also been involved. The consultant met with a number of these MYAP groups, which are organized and managed in very similar ways, so will not be described in any detail here.<sup>47</sup> It was very evident that the World Vision group met was very proud of their role with in their community, and quite well organized. It was also evident that all communities facing similar potential challenges would benefit from this program approach and the materials furnished with it.

<sup>45</sup> Eggs were never given to young children in the past, believing it would cause baldness.

<sup>46</sup> During many of the groups sessions, the consultant asked mothers were consistently preparing enriched porridge for their young children if, were he to go to their homes, would he find a bottle or container with dried and powdered Moringa leaves as a food supplement. I was assured that I would find this in most homes.

<sup>47</sup> See the example given for SANA, page 23 above, which closely parallels what was observed with the other MYAP groups.

## 2.4 Osanzaya MYAP (ADRA): Lessons Learned, Best Practices & Successful Strategies

### 2.4.1 Background

Zambezia Province in Mozambique is the most-populous, currently with over 4 million people living in districts with great agricultural potential and favorable rainfall.<sup>48</sup> Both Osanzaya and Ocluvela MYAPs were undertaken in different districts within Zambezia Province, with Osanzaya's program encircled by that of Ocluvela (see MYAP map, p. 4). Both MYAP's seemed to have an overall approach in which the major program thrust was through a **production/marketing focus** through Farmer Associations developed in past DAP involvement. ADRA states that their "*key area of intervention for food security (will) focus on improving yields through increasing land productivity*", and on "*rapid rural income growth*" achieved through improved "*leverage in the markets*" for Farmers Associations and Unions to "*capture the attention (and business) of commercial buyers*"<sup>49</sup>. This clarity of focus sets ADRA's program off from some of the other MYAPs. With this MYAP, special attention was to the legalization of FA's and developing improved sales of key commodities by organizing FA's into unions, and ultimately cooperatives.<sup>50</sup> The effort to 'integrate' the two major components of the MYAP, health and nutrition efforts which was promoted by USAID early on in the MYAP seems to have been largely (and successfully) tacked onto existing community FA programs through a Community Health Councils (CHCs) strategy and their outreach to pregnant women and mothers of children under five years of age within the community.

Osanzaya's strategy within its five Zambezia districts has been similar to that of Ocluvela, with the difference that that Osanzaya's approach to Farmer Associations (of about 25 farmers each) organizing into Unions (about 10 FA per union), and these into a cooperative company uniting a group of Unions appears to provide a strong base for marketing and a more egalitarian distribution of benefits to the Farmer Association base of households. Osanzaya initiated its MYAP efforts in the same areas as their previous two DAPs, and simply built on mostly existing Farmer Association's and established what they called "Community Health Councils' to communicate principally health/nutrition/sanitation/hygiene messages to local communities. A review of ADRA MYAP 's proposal nowhere states that they intended to integrate their agricultural/marketing activities with their nutrition/health interventions.<sup>51</sup>

Osanzaya's strongest and most successful activities revolve around their Farmer Associations, of which 210 (of 276) have become legalized, and these further organized (by first year of MYAP) into 27 Unions (called Forums by Ocluvela) for selling aggregated member association surplus commodities to large buyers. At the community level, the FA's were supported by Osanzaya's agricultural and marketing technicians working through the members of the FA's – in the same way that the members of the CHCs worked within the same community on the more targeted nutrition/health messages. Most Unions have around 10 associations associated with them, some considerably stronger than others, and most Unions benefited by MYAP assistance in the construction of either storage warehouses (2 at about \$20,000 apiece), and some 28 community build warehouses<sup>52</sup>. Some of these Unions have been outstandingly successful, and one cooperative organization has been created, and discussions have begun in this last year to initiate two additional cooperatives.

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<sup>48</sup> Osanzaya's baseline also suggested that as many as 96% of respondents depended on agriculture as their primary livelihood, with the balance reporting fishing, small businesses, and animal husbandry (2008 Baseline report, page 12).

<sup>49</sup> ADRA 2008 Baseline report, p. 13, 5, and Success Story (Annex 8)

<sup>50</sup> In areas where these NGO's had previous DAPs, it would be generally true that the farmer groups and associations worked with had already learned well the major themes promoted on increasing agricultural production (e.g. planting in rows, conservations tillage, intercropping and proper spacing, need for quality seed and improved varieties, improved inputs and storage). The MYAPs needed to move beyond this and focus on strengthening the FA's and organizing them into unions/forums for aggregation of key commodities to attract bigger buyers and by-passing local middlemen – thereby attracting higher prices.

<sup>51</sup> ADRA/Mozambique MYAP Baseline Survey Report, November 2008.

<sup>52</sup> MYAP provided metal roofs, doors, and cement for construction, and the community provided labor and bricks.

With a total membership of 5,335 trained individuals, Osanzaya's 194 Community Health Councils' (CHCs) are groups that almost always include the 25 members as the Farmer Association in the community. About 70% of all FA's (276) were linked with the same 194 CHCs. The consultant met with seven different communities and explored the linkage between FA's and the CHCs<sup>53</sup>. The integration of the CHC's into the existing FA's is striking, and it is also clear that community women (mothers) have been taking a leadership role in the various CHC sub-groups, but with strong support of the community men (fathers) of these households. The so-called 'mothers/father group' is almost always heavily weighted towards women, and in some communities was found to be exclusively women.

In this sense, one could say that the nutrition/health and agricultural/marketing activities of Osanzaya's targeted communities became completely integrated. As with the World Vision led MYAP, each Osanzaya CHC is made up of three sub-categories of individuals: (1) a number of male and female volunteers – about 15 in number, (2) a smaller group of 4-5 mothers and fathers in what is called a 'mother/father group' – though it is not strictly a group at all. Finally, (3) every CHC also has at least one, and sometimes two or three 'councilors' who are respected men and/or women within the community who help other members of the CHC if they run into difficulties with some community households, or if Osanzaya's personnel face specific challenges that they cannot resolve within the community.



Unlike SANA and FH, Osanzaya, like Ocluvella, **does not have mothers groups**, per se, led by local community health volunteers (promoters and *animadoras*), who themselves are led by MYAP health technicians.

Each Osanzaya health supervisor manages two districts and four health technicians (2 per district). Each project health technician supervises 16 different CHSs through 12 technical modules over a period of 3 months, when refreshing training starts again. They also train the local CHC volunteers and the 'mother/father group' individuals. Each CHC health volunteer is expected to visit some 15 community households each month (over a 4 day period) with both appropriate agricultural and nutrition/health messages. Two of these volunteers receive special training by the MoH in growth monitoring and assist the health technician during the local community growth monitoring sessions.<sup>54</sup> The health volunteers, during their monthly visits, may

<sup>53</sup> In Namaribo, their Farmer Association had 25 members, all of whom were also part of the 28 member CHC. This CHC had 15 community volunteers (6 men, 9 women); 10 members of their 'mothers/fathers group' (2 men, 8 women), and 3 councilors (2 men, 1 woman). In Lissava, the FA had 25 members and the same individuals formed their CHC, with 10 community volunteers (2 men, 8 women); 9 members of their 'mothers/fathers group' (1 man, 8 women), and 2 councilors (1 man, 1 woman). In Impague, their Farmers Association had 27 members (10 men, 17 women). The President of the FA is also the leader of the CHC, the secretary of the FA is also the vice-president of the FA, and the treasurer of the FA is also one of the councilors of the CHC. The 27 member CHC has 15 community volunteers (6 men, 9 women), 13 members of their 'mothers/fathers group' (2 men, 11 women), and 2 councilors (1 man, 1 woman).

<sup>54</sup> During our interviews, the consultant asked these volunteers what their 'job description' included. The list was very long, and included: visiting community families in their homes, communicate about good health practices (washing hands with soap, basic hygiene, cleanliness in the house and around the compound, digging holes for rubbish, use of latrines and how to build these, covering food from flies, use of washing stands for dishes/pots and pans, cover drinking water, use of mosquito nets, dangers of malaria for especially pregnant women and young children, inspect source of HH water and need for boiling it or use of chlorine for drinking water,

encounter households where children appear malnourished or sick. They will report these households to a member of the community 'mothers/fathers group' who will then give a more intensive visit to the family in question – searching for a possible cause and offering advice.

Each member of the 'mothers/fathers group' provides more hands-on demonstrations to community mothers about how to prepare enriched porridge for their children, especially malnourished children.<sup>55</sup> They may learn that a child, when weighed, shows signs of malnutrition so a household visit will help show the mother how to prepare enriched porridge with materials available with the 'four food groups' or perhaps there is a need for better hygiene, sanitation, etc. to prevent diarrhea and malaria. They will also refer children under 5 who fall in the severely malnourished category to the local health clinic. Osanzaya growth monitoring of the under five children (with focus on the under two) takes place in areas that are 10 km or more from a government health facility. Interestingly, in numerous consultant interviews with Osanzaya mothers of children under two years of age, their ability to communicate freely and enthusiastically about what they 'had learned from the MYAP' was strikingly less than that of SANA and FH where mothers participated in actual mothers groups.

#### 2.4.2 Lessons Learned<sup>56</sup>

- Training community members using picture cards/images increases beneficiary participation and learning
- Domicile visits (by community Health Council volunteers) help participants to improve behavior change.
- Training community members in specific topics and providing them with the necessary materials to implement the activities is critical to behavior change.
- Involving local (community) authorities (through the FAs and CHCs) in project activity implementation improves community participation.
- One reason for the success of the Farmers Associations and Unions is linked to the associations strategy of carefully targeting buyers and offering them attractive prices for selected crops **and** the increased interest of indirect beneficiaries (farmers who are not members of the FA) to participate (and not be excluded) in the joint sale of their produce. This permits the entire community of farmers to benefit through increased family incomes, and not just the lucky sub-group who happen to be a member of the local FA. New FA's have then been encouraged to form as well.
- The importance of creating incentives for greater participation in growth monitoring by community mothers. By linking GM sessions with cooking demonstrations (enriched porridge and the 4 food groups) , the visit of a mobile health clinic and child vaccinations, participation rates dramatically increase. Additional incentives each month are needed to maximize the consistent participation of mothers with children under five years of age, and especially the under two.

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how to prevent diarrhea, if a child appears ill (swollen belly, orange-ish hair, results of GMP) council mother and father about enriched porridge for child on a regular basis (if over 6 months of age), exclusive breastfeeding of the under 6 months, encouraging family to take an ill or severely malnourished child to clinic – sometimes even helping to get the child there – and on, and on....

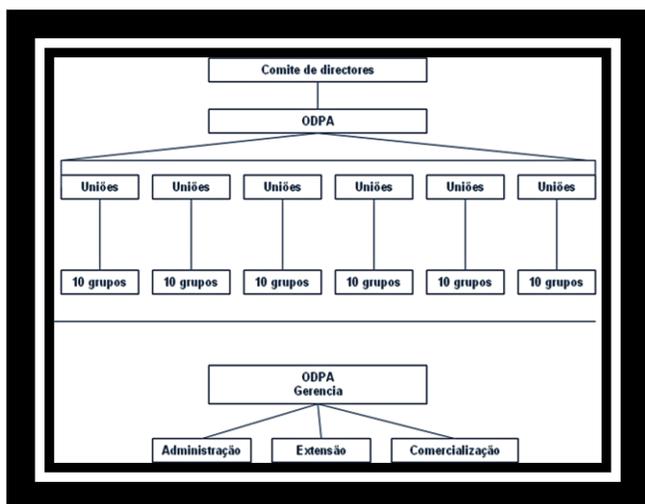
<sup>55</sup> Again, the consultant asked these members of these 'mothers/fathers group' what they saw their key responsibilities to be. Their role was mainly for prevention and 'how to' demonstrations, either at the community level, or within the households of families whose children (under 2 in particular) were experiencing health/nutrition problems. They would show mothers how to prepare enriched food based on seasonally locally available four food groups (basic foods, growth, protection, foods rich in energy) for a balanced diet. They listed out the kinds of foods which fit each of these categories. They would promote exclusive breastfeeding (and washing of breast before feeding) for the under 6 months and the continued breastfeeding through the first 2 years of child's development. They will instruct pregnant mothers about appropriate actions to take, including regular check-ups with health clinic, working less during the last months of pregnancy, taking more rest at this time, etc. They will announce when they would give a community demonstration on how to prepare enriched porridge for the family, and the health volunteers will communicate this throughout the community to alert people of the event. They visit at least 10 mothers each month, and often do these visits as a sub-group - that is two or three members of the 'mothers/fathers group' will go together to make these visits.

<sup>56</sup> Fiscal Year 2012Annual Result Report, ADRA International/Mozambique, November 05, 2012, page 8.

### 2.4.3 Best Practices

**(1) Unions - Cooperatives:** ADRA has been very successful in communicating to MYAP farmer beneficiary households the message expressed so well by this visual image, used in one of their recent PowerPoint presentations, on just why the creation of Unions and Cooperatives is so important to leverage the commercial power and protect the interests of the thousands of beneficiary farmer households in their respective Farmer Associations.<sup>57</sup>

Also included in this PowerPoint was a figure showing how groups of 10 Farmer Associations are organized into Unions, and then



these Unions themselves

further organized into the ODP cooperative with its board of directors. Institutionalizing such unions and such a cooperative within Zambezia must surely be considered among the most important achievements of the ADRA program and the approach used considered a 'best practice'. ADRA notes that during FY 2012 support was given to "27 unions that comprise 276 associations... The joint selling which the farmers did through the Unions led to an increase in family incomes. A total of 3,760 MT of produce was sold resulting in a total sale of US \$1,588,563." And as stated elsewhere "this extraordinary income has allowed them (farmer households) to not only begin to think entrepreneurially, but to also attain some lifelong goals."<sup>58</sup>



La unión hace la fuerza.

It is important to emphasize that it is **NOT** only the 25 or so households members of these Farmer Associations that are benefiting from this inflow of funds, but also other community farmer beneficiaries who are indirect beneficiaries by being able to also market their produce through their local Farmer Associations.<sup>59</sup>

**(2) Community Health Councils (CHCs) Directly Linked to Community Farmer Association:** The creation and strengthening of CHCs quite clearly was foundational for all the achievements realized by Osanzaya interventions within nutrition/health and sanitation/hygiene. By the end of the project CHC's existed in 194 of the 276 Farmer Associations worked with. A total of 5,335 individuals (community volunteers) within these 194 CHC were trained and represent a permanent community leadership asset for sustaining many of the lessons learned into the future.

**(3) Growth Monitoring:** This labor intensive activity was also clearly one of the most appreciated activities of Osanzaya's nutrition/health activities and this past year some 5,968 children under two were regularly being weighed, and 5,616 children between 2 and 5 years of age. As noted in one of their reports "Growth monitoring gives mothers' information about the nutritional status of their children and advice according to the

<sup>57</sup> ORGANIZAÇÃO DE UNIÕES DE PRODUTORES MOCUBA/MAGANJA DA COSTA, ADRA PowerPoint Presentation 2012.

<sup>58</sup> See Annex 8, Osanzaya success story in marketing and ADRA FY 2012 Annual Results Report, p. 1

<sup>59</sup> In ADRA's FY 2010 Annual Results report for example, they noted that production sold that year came from 4,414 farmer members of the Farmer Associations, and 4,422 indirect beneficiaries (p. 3). It is not only the members of the FA's that are benefiting!

*nutritional situation identified.”*<sup>60</sup> The actual weighing was undertaken by the Osanzaya health technician with the assistance of the CHC health promoters.

**(4) Exclusive Breastfeeding and Enriched Porridge (based on 4 food groups):** Training provided through the CHC’s was effective in dramatically changing infant breastfeeding behaviors/practices. From a baseline of 65% in 2008, Osanzaya had already achieved 94.4% by the end of FY 2010, and this has moved close to 100% currently, based on my interviews among hundreds of nursing mothers. And mothers interviewed repeatedly expressed the importance of learning of the importance of a balanced diet for their young children (and older ones as well), the seasonal identification and use of the four food groups in preparing highly nutrition enriched porridge for their children over 6 months of age – with remarkable results in improved nutrition and growth.

**(5) Strategy for Rapid Rural Income Growth through targeted agricultural commodities:**

Within the five years of Osanzaya efforts to increase farmer agricultural productivity through both increased yields and increased areas cultivated, as well as increased returns for commodities produced, documented sales of targeted commodities by the Unions and Cooperative through March 31, 2013 have exceeded \$5,565,321 – almost equally the total MYAP cost of \$6,942,785. And these sales do not count the value of the increased production used by households for their consumption needs, or for seed, or that may have been sold privately through other market channels or their Farmer Association. Clearly, once again, the way messages were communicated to farmers within the 276 farmer associations concerning how to increase crop productivity, how to care for higher quantity and greater yields of the product harvested and stored – meeting market demands for specific products – was effective. The introduction of some 80 improved granaries of the Gorongosa type at the FA levels proved significant, linked to community built centralized warehouses for Union storage of hundreds of tons of commodity for bulking and large commercial sales.

**(6) Regional and Export Market Linkages**

The strategies used to develop market linkages between Unions and Cooperative with regional and international markets, based on market demand, quality, and quantity/volume has been outstanding. A key player in this has been the World Food Program itself and the high standards for quality control it has set for purchase.<sup>61</sup> WFP has been the Osanzaya MYAP’s best client, paying the highest prices for the quality it insists on. Unions and Cooperative have come to understand just how serious meeting these standards is –and the implications should they fail to meet this. Osanzaya has been very successful in helping Unions and Cooperative to acquire the skills and discipline needed to succeed and be competitive. This is shown in the evolution purchases by WFP of maize from Osanzaya supported Unions and Cooperative:



<sup>60</sup> ADRA Mozambique FY 2010 Annual Results Report, page 2, October 2, 2010

<sup>61</sup> The photograph here shows the WFP ‘Blue Box’ given to the Union (and Cooperative) to help assure standard quality of maize sold. The Union must prepare samples from the maize they hope to sell to WFP (for humidity levels, size, aflatoxin control), and WFP trained 3 members to undertake these quality controls. Samples are cleaned, removing impurities, and weighed and must not exceed 14% humidity. Tools must be sterilized. A sample of maize is blended to measure aflatoxin levels. The Union must test samples from sacks of maize they intend to sell to reduce the risk that when WFP itself comes to take its own samples, the Union’s commodity will not fail the test (and not be purchased). This is a high risk activity and if the Union’s commodity fails the WFP test, the WFP will not trust their ability to provide the quality required for purchase and may lose this key market opportunity.

2011: 150 metric tons purchased  
 2011: 230 metric tons purchased  
 2012: 310 metric tons purchased  
 2013: (planned) 1,500 metric tons

Osanzaya has also identified major export traders (Indo-Africa, IMPEX, Export Marketing, and regional wholesalers) for a number of other key commodities (pidgeon peas, groundnuts) with which the Unions have now established relationships. This holds promise for sustainability of these efforts. By the end of this MYAP, aggregated sales through the unions have included:

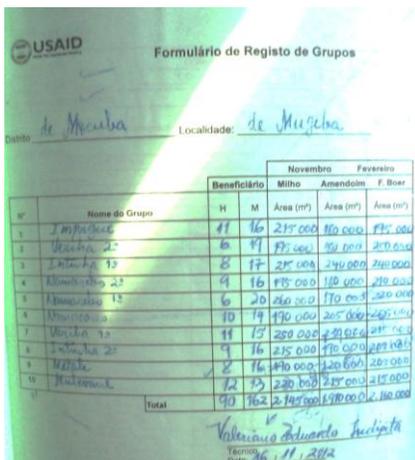
Maize: \$722,879 (4,430 MT)  
 Groundnuts: \$2,091,674 (4,022 MT)  
 Pidgeon Pea: \$1,545,761 (3,637 MT)  
 Cashew Nuts: \$905,005 (1,280 MT)

**(7) Adult Literacy and links to Business Literacy**

The importance of adult literacy activities of the Osanzaya program cannot be minimized as this has also become the foundation upon which the Farmer Associations and Unions are better able to manage their affairs, and to assist their household memberships to understand that farming is itself a business, and needs to be run as such with appropriate records and quality checks.

**(8) Market Information System**

The availability of market information has been an important component for Zambezia Farmer Associations and Unions to monitor the evolution of prices for the basic commodities they are planning to commercialize and assists them in creating FA and Union production and commercialization business plans for the up-coming year. It is also an important example of collaboration with the Ministry of Agriculture who has made this system possible. The Agricultural Marketing System for the Province of Zambezia (SIMAPZ) is something that all MYAP marketing programs could benefit from. One photo here illustrates the plans for one FA, with 27 members, and the area they planned to cultivate for their three key commercial crops. These data are then transmitted to the union of which they are a member to consolidate into an overall plan for the year. From this, a rough estimate is made about potential production for the coming year and sales volumes they may be able to reach. The second photo, at left, shows a union with 10 Farmer Associations – and what each FA planned for the 2012 cropping season for areas cultivated for maize, pidgeon pea, and groundnuts. The chart also illustrates the gender breakdown for each FA, and the fact that most have about 25 members.



### 3.0 MYAP Program Synthesis of Best Practices

Specific details of the Mozambique MYAPs within the overall goal and strategic objectives of the program were often similar – such as promoting exclusive breastfeeding for babies under 6 months, or training household farmers within Farmer Associations to plant in rows, or not to burn the grass from their fields prior to planting. It is at the level of overall program strategic approach to communicating such themes that one finds the greatest differences – and perhaps in results and impacts as well. It is the combination of good practices, through a sound program strategy, which has resulted in the best results and which have the greatest potential for sustainability and continued impact following the end of the MYAPs. Some of the ‘best practices’ applied by these MYAP organizations elsewhere in Africa were not applied in Mozambique.<sup>62</sup> However, it was also obvious that the direct beneficiaries – and probably numerous in-direct beneficiaries – of all four MYAPs have seen:

- Significant agricultural productivity increases – resulting in greater food availability;
- Greater access to food, particularly during the hunger months between November and March each year. Achieved by intentionally emphasizing dividing household level production results into three major categories of future seed needs, household food security needs, and produce for sale – and promoting improved means of producing, storage and care of these commodities. Indeed, based on what was observed, in the absence of some catastrophic event, the hunger season no longer applies to MYAP beneficiaries.
- Finally, training given to mothers (and some fathers) in nutritional behaviors such as exclusive breastfeeding, enriched porridge with the four food groups, basic hygiene and sanitation, has also dramatically improved the utilization of available food resources for the entire household, not just infants and children under five years of age.
- Benefits through the early establishment of local Community Development Committees (CDC) – best seen in OCLUVELA AND OSANZAYA communities – with their Health Council support systems.

Table 7 below provides a cross-comparison of some of the major MYAP outcome deliverables over the past five years.<sup>63</sup>

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<sup>62</sup> Several of these will be suggested in the ‘missed opportunities’ section of this report (6.0).

<sup>63</sup> Data presented on this table were either given by the concerned MYAP program leaders or their M&E leaders; some of the numbers were extracted from the most recent reports available. MYAPs were given the opportunity to review these numbers before completion of this report and update or revise the numbers if desired.

| <b>Table 7: General Summary of MYAP Program (by the Numbers)(Through March 31, 2013)</b>               | <b>OCLUVELA</b> | <b>OSANZAYA</b> | <b>SANA</b>   | <b>Feed the Hungry</b> |
|--|-----------------|-----------------|---------------|------------------------|
| Pre-MYAP Estimated Cost in 2008 (monetization & 202 e funds)   | \$ 13,185,279   | \$ 12,000,000   | \$17,307,304  | \$8,297,229            |
| Total Program Actual Cost (US \$) Through March 31, 2013 (monetization & 202 e funds)                  |                 | \$ 6,942,785    | \$ 25,858,852 | \$ 13,618,533          |
| Estimated Total Population (people, not households) <b>direct beneficiaries</b>                        | 196,024         | 35,630          | 324,000       | 47,630                 |
| Estimated Program Cost per Direct Beneficiary  | \$67            | \$195           | \$80          | \$286                  |
| <b>Total Aggregated Commodity Metric Tons sold by FA, Unions, Cooperatives Through March 31, 2013</b>  |                 |                 |               |                        |
| Maize  | 18,802          | 13,371          | 14,533        | 99 (1)                 |
| Groundnuts   | 9,856           | 4,430           | 5,137         | -                      |
| Sesame   | 991             | 4,023           | 4,681         | -                      |
| Soybeans   | 958             | -               | 1,365         | 79                     |
| Pidgeon Pea  | 1,900           | -               | 269           | -                      |
| Other (Cashew nuts for ADRA, tomato for WV, rice for FH, manioc, cowpeas and other beans for SAVE)     | 269             | 3,637           | 225           | -                      |
|  | 4,473           | 1,281           | 2,856         | 20                     |
| <b>Total Aggregated Commodity Sales (US \$) by FA, Unions, Cooperatives Through March 31, 2013</b>     |                 |                 |               |                        |
| Maize  | \$536,098       | \$ 5,265,323    | \$ 5,547,145  | \$93,501               |
| Groundnuts   | \$326,356       | \$ 722,881      | \$ 617,951    |                        |
| Sesame   | \$26,194        | \$ 2,091,675    | \$ 2,786,471  |                        |
| Soybeans (WV), Cowpeas (SAVE)  | \$15,479        | \$ -            | \$ 1,095,841  | \$76,120               |
| Pidgeon Pea  | \$60,653        | \$ -            | \$ 363,194    |                        |
| Other (Cashew nuts - ADRA, tomato - WV, rice for FH)(cassava sweet potato, peas, sorghum - SAVE)       | \$92,904        | \$ 1,545,761    | \$ 72,744     |                        |
|  | \$14,512        | \$ 905,006      | \$ 610,744    | \$17,381               |
| <b>Total # of Metallic Silos Distributed</b>   |                 |                 |               |                        |
|  | 200             | 0               | 160           | 0                      |
| <b>Total # of Gorongosa Improved Silos Constructed</b>   |                 |                 |               |                        |
|  | 216             | 80              | 111           | 0                      |
| <b>Total # of Hermetic Storage Sacks Distributed</b>   |                 |                 |               |                        |
|  | N/A             | 0               | 800           | 0                      |
| <b>Total # of Farmers Associations Worked With (called Farmer Field &amp; Life Group by FH)</b>        |                 |                 |               |                        |
|  | 333             | 276             | 3,425         | 416                    |
| <b>Total Membership of these FA's</b>  |                 |                 |               |                        |
|  | 9,388           | 7,126           | 77,105        | 7,907                  |
| <b>Total # of FA's Legalized</b>   |                 |                 |               |                        |
|  | 308             | 210             | 1,335         | 154                    |
| <b># of Community Development Councils/Committees, Community Leadership Councils) Established</b>      |                 |                 |               |                        |
|  | N/A             | N/A             | 375           | 48                     |
| <b># of Community Health Councils Created</b>  |                 |                 |               |                        |
|  | 330             | 194             | 375           | 0                      |
| <b># of Care Groups Created (FH)</b>   |                 |                 |               |                        |
|  | N/A             | N/A             | N/A           | 139                    |
| <b>Total Membership of Health Councils (councilors, volunteers, mother/father group members)</b>       |                 |                 |               |                        |
|  | 10,027          | 5,335           | 234,146       | N/A                    |
| <b># of Community Health Volunteers trained for these Health Councils</b>                              |                 |                 |               |                        |
|  | 3,357           | 3,380           | 3,076         | 1,390                  |
| <b># of members within the mother/father groups trained</b>  |                 |                 |               |                        |
|  | 1,884           | 1,552           | 231,099       | 19,745                 |
| <b>Total Number of Volunteer Community Health Promoters Trained</b>                                    |                 |                 |               |                        |
|  | N/A             | 3,882           | 257           | 45                     |
| <b>Total Number of Volunteer Community Health Animadoras Trained (or Mother Leaders in case of FH)</b> |                 |                 |               |                        |
|  | N/A             | N/A             | 2,570         | 2,486                  |
| <b>Total Number of Mothers Groups (which may have some fathers) Formed (led by Health Animadoras)</b>  |                 |                 |               |                        |
|  | N/A             | N/A             | 8,310         | 1,529                  |
| <b>Total Number of Mothers within these Mothers Groups</b>   |                 |                 |               |                        |
|  | 3,501           | N/A             | 205,175       | 15,290                 |
| <b>Total Number of Pregnant Women Worked with through these groups</b>                                 |                 |                 |               |                        |
|  | N/A             | N/A             | 11,475        | 2,311                  |
| <b>Total Number of Children Under Two Years Monitored for Growth</b>                                   |                 |                 |               |                        |
|  | 17,642          | 5,968           | 25,860        | 11,382                 |
| <b>Total Number of Children Under Five Years Monitored for Growth</b>                                  |                 |                 |               |                        |
|  | N/A             | 5,616           | 15,596        | 22,933                 |
| <b>Total # of Forums (Ocluelva &amp; SANA) or Unions (Osanzaya) Established</b>                        |                 |                 |               |                        |
|  | 44              | 27              | 104           | 16                     |
| <b>Total # of Cooperatives Established</b>   |                 |                 |               |                        |
|  | 36              | 1               | 18            | 0                      |
| <b># of Village Savings &amp; Loan (VSL) Groups Created</b>  |                 |                 |               |                        |
|  |                 |                 | 544           | 192                    |
| <b>Total Value of Funds Saved by VSL Groups</b>  |                 |                 |               |                        |
|  |                 |                 |               | \$264,930              |
| <b># of Community Resilience Groups Trained and Operational</b>  |                 |                 |               |                        |
|  | 12              | 0               | 80            | 46                     |

(1) Most of the commodities sold by FH farmers was done outside of the Farmer Associations, individually by farmers to local commercial people in local markets; FH data about these transactions showed that 500 MT of groundnuts were sold, 421 MT of sesame, 550 MT of pidgeon pea, and 680 MT of rice, for a total additional 2,151 MT of production. For the 154 groups assisted to become legal entities, 118 of these were actual farmer associations and 31 were village savings and loan groups (5 additional VSL groups were added recently).

### 3.1 General Strategic Approaches:

Striking differences exist between MYAP approaches to targeting communities – two leading with nutrition/health interventions, two leading through agricultural interventions. All four MYAPs were successful in communicating the core agriculture and health/nutrition messages. Yet the real issue is which approaches permit the integration of these in a manner that involves both men and women in a manner which is both natural and sustainable within the community. Such linkage is discussed in section 4.0 of this report, by taking the best practices of the MYAPs, and putting these together.

SANA and Food for the Hungry (FH) use fairly similar approaches, spearheading program efforts through nutrition/health activities and mother's groups/care groups – using voluntary community 'health promoters' and 'health animators' who lead 3-4 groups of mothers (of between 15-20 mothers each), with the integration of program agriculture and marketing efforts with Farmer Associations and Forums following along as food security support systems within the targeted communities. SANA developed its MYAP upon on pre-existing DAP 1 and DAP 2 programs where activities with Farmer Associations and nutrition/health groups were essentially separate geographically or in terms of direct beneficiaries and were NOT intentionally linked<sup>64</sup>. Yet 3,000 of SANA's 3,425 Farmer Associations were established within this MYAP period – and were linked into the communities with established nutrition/health programs.<sup>65</sup> The USAID Mozambique MYAP RFPs did not specifically state that there should be such a link; such guidance was given two years into the MYAPs (FY 2010) with the initiation of the Feed the Future initiative across USAID worldwide. At that time USAID requested that the MYAPs integrate both components, with the same target groups/communities for each.

OCLUVELA and OSANZAYA, on the other hand, spearheaded their program activities through agricultural and marketing efforts through Farmer Associations led by a Community Development Committee (CDC) – with efforts in health and nutrition tacked on through Health Councils super-imposed on their pre-existing Farmer Association groups (e.g. a Farmer Association made up of 27 members, will also have a Health Council of 27 members - same people – with different functions as 'volunteers', councilors, and a mother/farmer 'group' of individuals providing services to community mothers). Both OSANZAYA and OCLUVELA MYAP programs were built upon their earlier foundations of the DAP 1 and DAP programs, where the creation and training of members of Farmer Associations were the primary targets, with Health Councils for nutrition, hygiene and sanitation training eventually developed towards the end of DAP 2.

### 3.2 Approaches to Farmer Associations – Unions (or Forums) – Cooperative (or Federation)

MYAP major successes have included the legalization of Farmer Associations and their organization into functioning Unions (or Forums), and linking these to major regional buyers and the WFP. OSANZAYA's most recent work with a group of Unions to form Cooperatives also appears very promising towards export marketing. OCLUVELA and OSANZAYA MYAPs built upon a base of Farmer Associations from earlier DAP 1 and DAP 2 activities dating back 15 years ago. SANA and FH had to begin to form Farmer Associations (what FH call 'Farmer Field and Life Groups) at the beginning of the MYAP four years ago.

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<sup>64</sup> The Food for the Hunger MYAP was not preceded in Cabo DelGado with a DAP 1 or 2 period; they started from scratch.

<sup>65</sup> When the SANA proposal was developed, there was an assumption that there were about 1,400 farmer groups from the DAP 2 period upon which MYAP farmer association endeavors could build. An exhaustive effort was undertaken at the beginning of SANA to locate these groups, but only about 400 of these could be identified, and around 200 of these were, at the time, being supported by another program (EMPRENDA). USAID Mozambique guidance at the time was that since these 200 groups were already linked to markets and providers of seed (such as IKURU), SANA should not include them in their targeted beneficiaries; therefore only about 200 farmer groups from the DAP 2 were carried forward into the MYAP.

Ocluvela and SANA approaches achieved the organization of 3,425 Farmer Associations (with about 21 members each), of which 1,335 have become legally recognized.<sup>66</sup> FA's have also been integrated into 84 Forums, and these forums are the principal means of bulking some commodities for sale to regional large traders (for pidgeon pea, groundnuts mainly, and maize). SANA purposely linked its Forums with private buyers (and not World Food Program), believing this to be the more sustainable approach. SANA's Electronic Agriculture Market Information System (ESOKO) is also unique, offering weekly market price information for major crops, and provides offers of crop volumes available for sale from FA's and Forums, requests from buyers interested in specific crops, and more.

SANA appears to use a different approach to creating cooperative companies than the other MYAPs. SANA organizes Farmer Associations into forums. However, SANA does not transform associations and forums into coops automatically. These are organized with people who are members of associations who come from forums, as well as people coming from communities who are not part of the organized groups. SANA does not transform Farmer Associations into Forums, and then some Forums into cooperatives, as appears to be the case Ocluvela and Osanzaya MYAPs. SANA's principal of cooperative creation is based on the application of principles of cooperativism. A cooperative is created when a number of individuals agree to adhere to the principles established by the cooperative (cf. Annex 8, success story #7) Cooperatives are made up by 'singular' individuals<sup>67</sup> and 'collective' individuals. An established Farmer Association may decide to join a cooperative as a 'collective individual' – with one vote. SANA has supported the creation of 17 such Cooperatives, initially made up of a small number of members (13 of 17 cooperatives have less than 20 members). These SANA cooperatives exist where forums also exist, so there might seem to be a potential for competition between forums and these independent local cooperatives.<sup>68</sup> Yet, any Farmer Association is able to join the local cooperative if it is willing to abide by the governing principles. These cooperative member households sell their own household level production first through their cooperative. The cooperative exists as a private sector business effort to make profits and generate better conditions for the community. A successful cooperative will lead to replacing middlemen traders in the region<sup>69</sup>, who may begin to establish input supply channels to the cooperative. The members of these cooperatives (though members are themselves members of a farmer's association) do not represent a group of associations, or forums, or their members.

Ocluvela's approach is to organize existing and new FA's, currently some 333 in number (with about 290 of these legalized), into Forums, and Forums into Federations or Cooperatives. One community visited, Creschi, had a Farmer's Association of 25 members (9 men, 16 women), and associated Health Council of 25 members (same people). The World Food Program has become a critical buyer for both the Ocluvela and Osanzaya MYAPs. This FA was part of a Forum made up of 5 FA's, which last year (2012) had managed to sell together (with MYAP assistance) 32 metric tons of maize to the World Food Program, and an additional 27 MTs of soybeans to a district level trader. Federations/Cooperatives still appear to be in formation stage, and these apparently are led by a small group of individuals (perhaps as few as 5-10 people) at the top of pyramid of local associations and the Forums they have organized themselves into. In the case, Cooperative members are not

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<sup>66</sup> Forums must be legalized in order to be considered as a juridical entity, under the same law of associations. It should be said that associations not legalized can be part of a forum. Since forums are legalized they serve as a legal "umbrella" for those associations that are still not legal.

<sup>67</sup> These self-selecting individuals are enterprising farmers from different district Farmer Associations that want to create their own marketing businesses (they are not elected members representing a group of Unions for example).

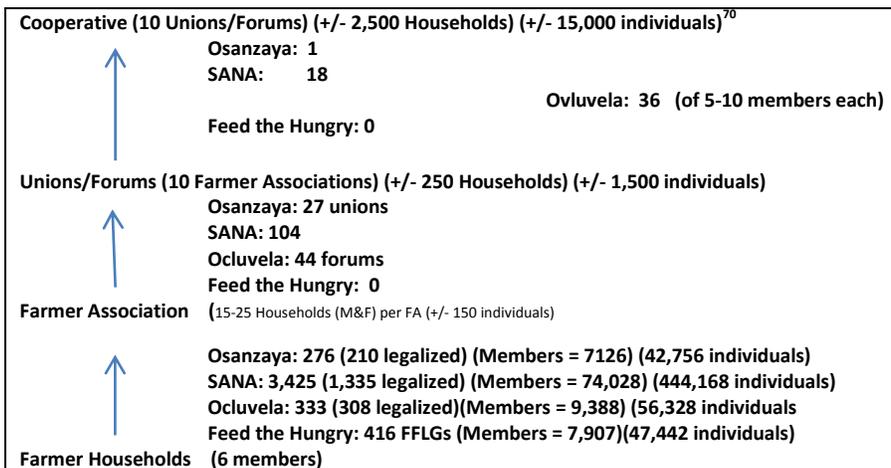
<sup>68</sup> This competition is not a cause to worry, since it is expected to stimulate improved efficiency on the part of the cooperatives or forums.

<sup>69</sup> Program approaches have consequences, and produce winners and losers; rural commercial 'middlemen' are frequently seen as the 'bad guys' exploiting rural farmers. Yet they also have costs of doing business, not always appreciated by others. Such middlemen traders, to stay in business, may need to establish new ways of providing services to these cooperatives – perhaps as agricultural input suppliers. They too have families and children and need appropriate nutrition training.

elected representatives of specific FA's or forums. This model may run the risk of top leadership not representing the needs and interests of the household base and the FA's supporting the system.

Osanzaya's approach is to strengthen 276 Farmer Associations (done over past years in the DAPs), and through the current MYAP to help 210 of these FA's become legal entities, and then organize 10 FA's into a number of Unions – which themselves become registered with the government. With each Farmer Association with about 25 members, each Union will represent about 250 – 275 households of close to 1,650 individuals. Two members of each member FA are elected by their FA to the Board of Directors of the Union – thus giving all FA households of all FA's within the Unions a representative on the Board. The 276 FA's have been formed into 27 Unions that have the power to bulk the smaller quantities of key products (maize for the World Food Program – their most important buyer, and principally pidgeon peas, groundnuts for other regional big traders) coming from their FA members. During the 2013 season 310 metric tons of maize were sold by the Unions to the WFP, at between 10-12 M/kg – compared to the usual 6 M/Kg or less received by FA's from local traders – a major incentive indeed! The FA's are assisted every year in planning production goals for the key commodities – often based on contracted orders for a specific quantity of maize from WFP, for example. FA's give their combined bulked products to their Unions, without being paid for commodity, and receive the proceeds when the contract is executed and paid.

Currently, a pilot activity of 11 OSANZAYA Unions (of 10 FA's each) within one district visited has successfully organized, in coordination with PRODEZIA, into a company with a cooperative structure, whose aim is to bulk even greater quantities of commodities from their constituent members. In this case, the Cooperative is to pay for the commodity to the Unions at a slightly reduced price for them to support themselves while waiting for the Cooperative to sell their products to the big buyers. When the Cooperative has managed to sell to these buyers, it will then come back to pay the difference to the Unions. From that difference the Cooperative will take part as their "Commission" for supporting their operational costs/expenses. This will be based on an agreement between the Cooperative and the Unions. This system permits the Unions to then pay their FA members quickly, without a long wait. It permits the Cooperative to sell to large dealers like WFP or export market traders (to India for example for pidgeon pea and groundnuts). WFP has a stringent set of guidelines to follow in preparation of the maize they purchase, and a Cooperative risks loosing this profitable business opportunity if these are not carefully followed. Cooperative leaders noted to me that they are also encouraging agricultural input suppliers to provide them their products at much reduced prices (because of volume), which they plan to turn around and sell at a slight profit to their FA and Union members – still at prices that are lower than these farmers could expect if they tried to find these inputs on the open market (if at all). Inputs could include such items as improved seed materials, farm implements, sacks for produce, tools, hermetic bags for seed and grain storage, metal silos, etc.). OSANZAYA, in partnership with AGRIFUTURO, is also in the process of creating two additional cooperatives along these same principles.



In theory, any farmer within a community could be a member of the Farmer Association of that community. The reality, however, is that the membership of a Farmer Association was established by the MYAPs at between 15 – 25 members – a number which has not tended to grow - and many communities only have one Farmer Association. There are many farmers who did not initially show interest in being a member of the FA. During interviews with mothers of various Mother’s Groups of the nutrition/health interventions, many mothers noted that neither they, nor their husbands were part of a Farmers’ Association. So one must ask what will happen to these ‘other farmers’ who are **NOT** members of a FA. In principal, they could organize themselves into a new Farmer Association - but are unlikely to do so without support/encouragement of external extension support. One might also wonder what will be the impact on prices and available of commodities within local markets and whether or not another form of food insecurity among a different group of people within the community develop. Some monitoring of market prices (purchases and sales) of key commodities like maize, groundnuts, and sesame might be justified where strong cooperatives have developed to follow the evolution on marketing successes for one segment within a community on another segment of the community.

### 3.3 Agricultural Messages

All four MYAPs have effectively transferred a number of basic agricultural messages to farmers through the Farmer Associations (or in FH’s case, their Farmer Field and Life Groups). Direct beneficiaries interviewed all emphatically stated that crop productivity per hectare has increased, as well as the sizes of their overall agricultural holdings – often using money earned through increased sales to pay for labor to clear new land. Themes of conservation tillage, leaving weeded grasses unburned on fields, planting in rows, of several appropriate intercrops (maize/pidgeon pea), crop rotations, improved means of seed and grain storage, intentional division of season’s production into food security needs, seed, and sale crops and, perhaps most important of all, the bulking of their commodities through their associations – or Forum if this existed - to obtain higher prices. For MYAP beneficiaries, quoting their own statements noted that the so-called ‘hunger season between November and February/March of each year “no longer exists” and, if truth be known, these households are certainly above the poverty line of \$1.25/person/day.

**3.4 Exclusive Breastfeeding:** This theme has dramatically changed behavior in just a few years time for all MYAP direct beneficiaries – and probably thousands of in-direct beneficiary households. Women once would not give their newborn babies the first colostrum milk, thinking something was wrong with it. Another nursing mother would take the baby for a few days until ‘proper’ milk began to flow. Now mothers know that the ‘first milk’ has important properties for the child’s immune system, resistance against diseases, less diarrhea, etc.

<sup>70</sup> Annex 8 provides additional details on the different MYAPs, and data on results achieved. I am using 6 persons per household to calculate individuals reached by these programs. FG Farmer Field and Life Groups (FFLG’s) are essentially same thing as Farmer Associations.

They also clearly understand that they must NOT give anything but breast milk during those first six months of the baby's life, and only begin to supplement this with nutritious porridge after 6 months and continue breastfeeding through the second year of child's life. Women with children over five years of age noted that they used to give their infants (under six months) water and porridge at feeding times and did not practice exclusive breastfeeding at all. This is new, and perhaps universally adopted, as this message comes strongly from the MYAPs, GoM health centers, and counseling over the radio.

**3.5 Family Planning:** Most groups interviewed independently mentioned family planning as among the most important concepts they have learned about and adopted in recent years. They can get pills at the health clinic, or injections, to control pregnancy, or husbands can use condoms – though in many cases mothers noted that the GoM health clinic were frequently out of supplies. Mothers also noted that the spacing of their children permitted their babies to become better established before the next child came along. Husbands in some SANA groups (surprisingly) also noted that they were having less extra-marital partners as a result as well.

**3.6 Supplemental Feeding and the Four Food Groups for infants over 6 months and children under 5** MYAP direct beneficiary mothers everywhere noted that the mixing, with the basic maize or manioc flour meal with ground peanuts, or sesame, with sugar, (ground greens – like Moringa), dried fish/shrimp will help the child to develop quickly and remain in better health. Eggs were once thought to cause baldness so were not fed to children – this has changed, and now the importance of fruit and other vegetables is also understood. Everyone knew of the 'four food groups' (energy/power; growth; protection; concentrated energy), and many were singing the 'four-group song' when we arrived for our meetings. Several groups had prepared baskets illustrating the four food groups from the current season's available production – which changes from one season to the other.



**3.7 Mother Groups (with local community volunteer Health Promoters and 'Animadoras' or Mother Leaders)**

Different approaches were used by the MYAPs in communication to the mothers in their targeted communities, but the overall approach to training mothers (and fathers) of children under two and below 5 in better ways to care for their children nutritionally were very successful. Mothers receiving this input were very positive about the benefits received within their households, and for their young children in particular. This included basic principles of hygiene and cleanliness, washing of hands and bodies, use of pit latrines with covers, and care that water was either boiled or treated with chlorine. Particularly cited were issues of exclusive breastfeeding for the under 6-month, continued breastfeeding through two years of age, and the importance of supplemental feeding of a tasty 'enriched porridge' (blended maize flour, with ground up groundnuts, some sugar, Moringa powder, ground beans or sesame) for children over 6 months of age several times each day (see photo) – but particularly for infants showing signs of undernourishment or malnutrition.

The visiting of health clinics each month during pregnancy (if possible) and regular visits for the children and mothers following childbirth. There has been a dramatic increase in numbers of mothers who now give birth at local health clinics as well, much because of the encouragement given to them through their local 'animadoras' and health promoters and mother's groups.



Based on what seemed to be the apparent vitality of the groups of mothers met within the different MYAPs, the SANA mother's groups and their volunteer health 'animadoras' were clearly the most dynamic and vocal. I found a sharp contrast in the ability of the SANA program's 'regular mothers with children under 5' and their ability and willingness to communicate about what they had learned through the MYAP in the SANA program, while it was often difficult to encourage OCLUVELA or OSANZAYA mothers in particular to speak up and express themselves. Their Health Council Volunteers and women in the 'mothers/fathers group' could speak well on these themes, but less well the community mothers themselves, suggesting that the lack of real mother's groups in the OCLUVELA and OSANZAYA programs may perhaps be one reason for this.<sup>71</sup>

SANA's use of 'mother's groups' appears closest to what might be considered 'best practices' used by Title III DAPs and MYAPs in other countries with which I am familiar (Rwanda, Haiti, Malawi in particular). SANA's qualified Health Technicians (usually a registered nurse) supervises a group of volunteer Health Promoters (who are frequently recognized by the local district level GoM health service) – who cover a number of communities. The Health and Nutrition Promoter is aided by up to two local Health Auxiliaries and who, in addition to nutrition/health training and promotion themes also lead in the actual weighing of children at the monthly growth monitoring sessions within each community. Each Health and Nutrition Promoter will train and support up to ten (usually female) 'animadoras' – generally one per community. Each 'animadora' was initially expected to form two groups of 15 mothers within each community (with priority given to pregnant women and mothers with children under 2 years of age, but also with children under 5 years); currently this has been expanded to 4 groups of 20 women under each 'animadora'. Interestingly, the actual composition of these formed groups has not changed much since they were formed several years earlier. These mother groups do not have Mother Leaders<sup>72</sup> however for each group, as is common in MYAP's in many other countries – and one possible weakness of the Mozambique programs.<sup>73</sup> The volunteer Health and Nutrition Promoter (who receive a small monthly stipend from the project of about \$15) and the local community

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<sup>71</sup> It is true that cultural considerations may have something to do with this as well, as the consultant was an outside white male asking what may have seemed rather personal questions, and women were simply shy in responding to someone they had never met before. Also, some may have felt that they were being evaluated in some manner, though assured that this was not the case in our opening remarks.

<sup>72</sup> SAVE and their Africare partner often consider the volunteer health *animadoras* as 'mother leaders', since they are the ones who provide the health and nutritional training to their groups of mothers. And this they do. An *animadora* may be responsible for the training of four 'groups of 20 women each' – or 80 women; yet each of these four groups themselves do not have their own leader. In best practices' for mothers groups, each mothers group has its own mother leader. This permits the natural creation, over time, of new groups of mothers, who will select their own leader to be trained by the volunteer community health trainer. With SANA, this training could be provided by either the volunteer community health and nutrition promoter or the *animadoras*. The SANA model limits the growth of new mothers clubs because of the physical constraint of the *animadoras* being able to keep adding new groups. So rather than training groups, the *animadora* task could be to train mother leaders of mother groups.

<sup>73</sup> SANA's sustainability strategy was not built upon the perpetuation of these mothers groups, but on the continuation of the GMP activities under the leadership of the Community Leadership Councils currently being trained by SANA and SCIP programs. All families with young children (and not just their mothers) will be part of this activity. Yet, these mothers groups themselves are one of the best means of providing structure and a means of communication on these issues to the mothers (and fathers) of the community.

'animadoras' volunteers provide a tremendous and much appreciated service within each community – and have become respected leaders in their own right for their community service.

Food for the Hungry also has a somewhat similar approach to SANA's as described above, except that the Mother's Groups of 15 women each are limited to only pregnant or women with children under two years of age. Therefore, unless a woman were to become pregnant again before her child passed the age of two, she is asked to leave the group, and be replaced with a different women who qualifies. Therefore FH mother's groups were interviewed who might have only 6 or 7 members who remained from the initial 15 when this group was first formed, with the other 8 or 9 being new members having replaced the 8 or 9 who had to leave the group. When asked about this, both the FH 'animadoras' and current members were clear that they did not like this system- where some had to leave their group. It certainly does not help in creating a local mother-child support group within the community.

Both OCLUVELA and OSANZAYA, on the other hand, use a completely different model to reach community mothers. The difference between 'mothers & fathers groups' is that this is a sub-group within the Community Health Councils (CHCs). This means that if a community has one CHC, it will also have only **one** 'Mothers & Fathers Group' – therefore providing less coverage within a community than the SANA model described above. The difference between "mother & fathers groups" from ADRA and WV is that this is a sub-group within the Community Health Council, which means if a community have one CHC then they will have only one "Mothers & fathers group". What OCLUVELA and OSANZAYA refer to, as the CHC Health Council's 'mothers/fathers group' in reports, are not strictly groups at all. OCLUVELA and OSANZAYA have integrated what are called Community Health Councils into their pre-MYAP DAP Farmer Association (FA) groups, thereby closely integrating agriculture with health/nutrition activities among the same target group of community leaders/volunteers. A community Farmer Association with 27 members will have the same 27 members serving on its Health Council. Within the Health Council are three distinct sub-groups:

- 1-3 councilors (respected, elder, community leaders who are called in, when needed, to resolve issues that may arise),
- A larger group of Volunteers, male and female, perhaps 17 in number, who each promotes health, nutrition **and** agricultural messages to about 15 households within their communities, and who will refer apparent undernourished children to their 'mothers/fathers' group for more intensive follow-up.
- And the 'mothers/fathers group', a smaller group of about 7-8 members - mostly women, but sometimes 1 or 2 men – whose task it is to specifically give community demonstrations on how to prepare nutritional, enriched foods of the 4 food groups, and will also visit specific households with apparent undernourished children (following weighing sessions, or referred by the Volunteers) to help mothers learn how to prepare better feeding of their youngest children with enriched porridge, review hygiene and sanitary issues with them (like dish drying racks), etc. There are no mother's groups within these OCLUVELA and OSANZAYA communities at all (in the sense of 15-20 mothers with children under 5 years, grouped together to be trained by health and agriculture community volunteer animators).



As currently configured, it is not likely that even those MYAPS with actual mothers groups will continue long after the exit of the MYAPs. This is because the mothers groups themselves do not have their own Mother

Leaders, though the local community volunteer ‘animadoras’ may be willing to continue to provide some of their services to some of these groups in the future. MYAPs could have built into these mothers groups other incentives to remain together as a mother/child support system within the community – such as creating savings/loan groups within many of these, or developing vegetable gardening or other activities focused towards the ‘hunger months’.<sup>74</sup>

### 3.8 Growth Monitoring of Children under 5, with focus on the under two

The monthly (and in the case of FH – every other month) taking the weight of children under two years of age, as well as those under 5 who show up, and the counseling that came along with it, within the target communities was one of the most appreciated and valued activities provided by the four MYAPs. Mothers mentioned this as a valued activity because it helped them to know if their infant or child was developing in the right way, or may need special attention. Some MYAPs have focused their growth monitoring in communities more than 15 kilometers from a GoM health clinic or hospital – though Farmer Associations worked with will be found near or in such communities. For SANA, it is 7-10 kilometers, to avoid strenuous physical effort on the part of the mothers who are pregnant or who may be carrying young (and sick) infants.

However, whether within a community where a GoM health clinic exists (and where mothers supposedly have more frequent access to having their child weighed – but don’t actually<sup>75</sup>) or at some distance away, mothers or fathers do not understand how to interpret the official growth monitoring card growth charts. Since only the GoM representative is officially allowed to write on these cards, only a few dots (or in most cases simply written out kilogram weights) will be found on these cards (cf. chart below, p. 60).<sup>76</sup> The fact that MYAPs may be weighing a specific child each month for past 2+ years never gets registered on these cards so the mother or father never come to be able to themselves monitor the growth changes in her child. Mothers would like to continue to have their young children weighed after the project is gone, but will only be able to do so if the Volunteer Health Promoter continues to do so on the scales currently provided by the MYAP. An acceptable means to permit continued growth monitoring in such communities has not yet been put into place, but could be an issue to challenge the local Community Development Council with. Farmer Associations and Unions purchase scales to weigh their agricultural production for sale, why not the purchase of scales for the weight monitoring of their own children?

It was not possible to assess the regularity of specific mothers, with specific children under 2 years of age, or under 5, in coming to the monthly weighing sessions. The number of children weighed at specific weighing places each month suggests significant variability here (cf. Annex 9 data) – many mothers do not bring their children every month for weighing’s, even when available. Increasing the frequency of regular child visits for the monthly weighing’s is important, and creative incentives to encourage this practice are important. MYAPs

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<sup>74</sup> As noted elsewhere, the MYAPs have been active in promoting Village Savings and Loan programs; the point here is only that the thousands of mothers groups could have been one avenue to promote these, but was not.

<sup>75</sup> The many GM cards reviewed for mothers in both villages where a health clinic exists (with no MYAP GM, and where MYAPs did GM), suggests there was little difference in markings on these cards. This suggests that the mothers benefiting from MYAP GM monthly weighing’s were actually **much more advantaged** than those living by a clinic, where they did not actually do monthly weighing’s.

<sup>76</sup> For example, the SANA health and nutrition promoter carries out the GMP activity, sometimes with the support of project health technicians who will at times ask the health and nutrition promoters to follow them during mobile brigades. If health and nutrition promoters reside in close proximity to a health center, they are asked to conduct the weighing activity at the health center itself in the presence of the government health technician. However the health and nutrition promoter is not allowed to fill in data on the children’s health cards or charts. They are only allowed to convey information to parents in a verbal fashion, such as the meaning of the weighing in relationship to the age of the child, and provide advice in relationship to the nutritional status of the child. In addition, they may write the information on a piece of paper, which could be attached to the health card. The consultant saw many of these ‘pieces of paper’ associated with specific cards, though few were attached.

have observed that growth monitoring associated to cooking demonstrations and vaccination campaigns increases mother participation. Other similar incentives need to be developed.

### 3.9 The Two Bridges

Of the four MYAPS visited, the SANA mother's groups appeared to be the most knowledgeable, enthusiastic, and creative in the promotion among their community households the key principles of infant and childcare and nutrition. Besides the presentations of four baskets containing samples of the various food groups – used to train mothers in what their infants and families require for good health and development, SANA health and nutrition promoters also created a number of other practical, visual, illustrations to communicate these important messages. One of these was the 'two bridges' leading to healthy children. The first bridge (far left on photo) is poorly constructed and weak – easy to fall off from. This is the first bridge over which a new born child until the age of 2 years must travel – a time of greatest risk and danger. To reduce this risk, the message is exclusive breastfeeding until six months and proper hygiene, followed by supplemental enriched porridge (of the 4 food groups) and continued breastfeeding until at least two years of age. Mother's breast must be cleaned prior to feeding, and infants and mother's clothes kept clean, with other basic household hygiene practiced. The second bridge (far right on photo) is more stable from 2 years of age through 5 years of age, but still with risk requiring continued hygiene behaviors, balanced food several times each day.



Another visible illustration created by SANA health and nutrition promoters was to create a miniature clay 'house' symbolizing the 'child's body', built on a foundation of corn/cereals/cassava energy foods, whose walls represent the strong physical growth (foods like meat, fish, beans, peanuts), and whose windows/doors and roof provides protection and cover to the body (from the green foods and fruit), with roof supporting pillars with the high energy foods (oil, sugar). These local illustrations were found to be much more effective in training in the four food groups, and why they were important, than the use of the color chart for these four food groups.

**3.10 Cooperatives:** The business/marketing approach for these groups brings together the more motivated farmers in the area. These are probably farmers with increased assets, and almost certainly are not among the 'vulnerable' households of the community. Given the recent development of cooperatives within the MYAPs, it is much too soon to make any judgment about their potential for success or sustainability beyond the life of the MYAPs.

### 3.11 Hermetic Storage Bags for seed storage, metal (FAO) silos, Gorongosa type improved granary, and grain storage warehouses for Forum and Cooperatives

While all four MYAPs have assisted some of their more successful groups of Farmer Associations in the construction of small warehouses for the bulking and storage of commercially orientated production (maize, groundnuts, pidgeon pea) for later sales when prices rise each year, OCLUVELA, OSANZAYA and SANA have been particularly aggressive and successful in introducing the Gorongosa type of improved traditional granaries (shown at right with SANA).



Many of OSANZAYA leading farmers in successful associations have also received steel containers for grain storage promoted by FAO. Some of these farmers, and others who did not benefit from the initial distribution, are asking for how they might themselves purchase these storage containers.



The special plastic hermetically sealing bags produced by GrainPro, a US-based company, with a recommended capacity for 50-60 kilograms of grain have also been greatly appreciated and are also currently sought by many farmers within Farmer Associations for seed grain storage, in particular, but for other produce as well. When well dried out, maize, pidgeon pea and groundnuts can be stored without risk of being eaten up by grain weevils.



Larger grain storage containers, using the same principles, are also being considered from this company. SANA is promoting the

use of larger units as well, such as Cocoons, with a capacity of 1 ton. Twenty units of this type will be distributed in April 2013 among organized groups.

### 3.12 Division of Food Stocks (Consumption – Seed – Sale)

Households have learned to intentionally divide out their food stocks, after harvest, placing the largest amount for household consumption in specific sacks or containers, putting aside what will be needed for seed the next planting season, and those sacks intended for sale. Because they are now producing more, they have more to sell as well. SANA recommends food reserves to cover a period of six months.

### 3.13 Village Savings and Loan Associations (VSLA's)

This was clearly another area of significant MYAP impact, and greatly appreciated by all those benefiting from them. VSLA's are a strategy to help reduce the risks of 'shocks' through the creation of small businesses and income diversification (sales of diverse commodities) and increases household resiliency. Groups have been formed, made up mostly of women, or men's groups, or the Resiliency Groups for Disaster Preparations. The money accumulated is loaned out at about 10% interest/month for various activities. Sometimes only the monthly interest is paid on the loan taken out, if the activity was extended for longer than a month. These loans generally are small in nature - 200 MT, 250 MT, largest was 2,500 MT - however, and each year, the savings group's total accumulated money is redistributed to members (based on what they had put in), and a new year of savings beginning soon after. SANA has created 544 such groups already, with plans to reach 800

before November 2013, with mothers participating in some of these. FH has made special efforts to help officially register 31 of their more successful VSLA's. The legalization of the VSLAs helps these groups to set up bank accounts and/or get bank loans themselves, or even eventually own other assets. As some FH groups are saving large amounts of money, legalization may be to their benefit as well to store their money in a safer manner (i.e. at the bank). The challenge remains the distances between the VSLA groups and the banks in Mocimboa.<sup>77</sup>

As suggested elsewhere, while serving an important need, this activity could be greatly expanded and improved upon based on best practices practiced by MYAPs elsewhere (e.g. Malawi, Rwanda).<sup>78</sup>

### **3.14 Nutrition/Health or Agriculture?**

When the direct beneficiaries – both men and women - of both MYAP program agricultural and nutrition/health activities were asked which was the more important area for focus, and where the greatest behavioral changes had taken place over the past four+ MYAP years, the answers were interesting.

As might perhaps be expected, mother's group beneficiaries generally stated that the greatest changes have taken place in the area of nutrition. Such topics as the first mother's milk, exclusive breastfeeding for babies under 6 months, supplemental enhanced feeding of children between 6 and 24 months, and for older children as well, personal/baby hygiene, clean homes and clothes, changed behaviors for pregnant mothers (such as not carrying of heavy loads, eating better, taking rest breaks), having the baby at the health clinic/hospital, family planning, and more – all these are entirely new and have forever changed mother's behavior, and father's support of their wives and children. Infants, mothers said, "*are growing faster, are looking really good, crawling and walking at much earlier ages, they are healthier, are much less often sick, rarely die*". Besides, said one women, "*we have always grown food crops – we are just becoming more productive now*". This latter comments illustrates successful integration of agricultural and nutrition/health activities of the MYAP.

Many men stated that they thought agriculture was more important. "*I used to produce crops like my father taught me*" but noticed that others were better off, buying a bicycle, or new metal roofing for their homes, so "*I joined the association and have learned to produce more on my land*". One man noted that the 'hunger months' were no longer a problem; there was sufficient food in the home now because of new methods learned through the MYAP agricultural program. Another man observed that both agricultural and nutrition activities were important, that we can't separate them – each depends on the other: without sufficient food production, the family would not have good nutrition or health, without good nutrition and health, it was difficult for the household to produce sufficient food.

### **3.15 Resiliency of Communities to Disasters, Shocks**

Though a fairly modest (third) component for the SANA, FH, and OCLUVELA MYAPs – and geographically quite focused on vulnerable areas along the coast or in valleys prone to serious flooding - the preparation of community disaster preparedness plans and the monitoring of the early warning systems to predict disasters has been quite successful. Following a common organizational plan, with well-defined tasks for each member of these community 'resiliency groups', these groups are also supported by a GoM agency called the *Instituto Nacional de Gestao de Calamidades* (INGC) (National Institute for Emergency Response). Each community

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<sup>77</sup> Note: VSLA's are different organizations from the Farmer Associations, with different structures and purposes.

<sup>78</sup> Such practices include increasing the capital of the group's savings from year to year (without redistribution at the end of each year (to many thousands of dollars' worth), placing their capital in a local bank, which eventually permits many such groups to qualify for loans from these banks, thereby further increasing the size of the individual loans that can be made out to members or people outside the group – and the size of the ventures initiated. People taking a loan from outside the group pay higher interest rates as well. Risk is assessed by the group's experience with ever-increasingly loan amounts to specific borrowers. The key is to keep the money working through loans, and not keeping it in the 'savings box' or bank account. Book-keeping and literacy become important for group success.

‘resiliency group’ is supplied with basic equipment to assist them in their tasks, in the event of an emergency, and have been trained to act quickly in response – with special attention given to young children and other vulnerable people within their communities. Safe houses are identified, and plans established on how to warn and move people to these locations using a system of flags, and loudspeakers. Two members have radios to receive and communicate early warning within their communities. Some members are trained in search and rescue. Those groups interviewed clearly had a sense of great pride in their roles within their communities, and proudly wore their orange vests showing this status. Most have established their own savings group that uses its funds to help in these emergency situations as well, helping community members to rebuild or replace lost food or shelters, for example.

It must be stated here though that, on a more general basis, the overall MYAP program interventions also contribute in perhaps a much more significant manner to helping a much greater number of local communities in the targeted MYAP districts to become more resilient to unexpected shocks and disasters by helping them to become more food secure and healthy as well. Increases in yields (kg/hectare) and value/kilogram for maize, pigeon pea, sesame, groundnuts and soybeans gives additional income to thousands of rural households, which in turn is clearly permitting them to improve the nutritional status of both household children and adults. Better understanding of nutrition – the importance of the four food groups to healthy lives, the importance of hygiene and good sanitation and the setting aside of sufficient food stocks and seed grain until the next farming season also has created a stronger base from which to meet future difficult periods.

#### **4.0 Integration/Linkage of Nutrition and Agriculture Activities?**

SANA states its MYAP program goal will “decrease household food insecurity”, OSANZAYA seeks to “reduce food insecurity” and states that their program “is an income-generating program”. FH’s and OCLUVELA MYAPs seek to “reduce food insecurity” in their targeted districts. All had one strategic objective (SO) focused towards increased productivity and marketing support through Farmer Associations and groupings of these FA’s, and one SO focused on improved nutrition and health practices targeting pregnant and lactating women and children under 5 years of age, with special focus on 0-24 months.

Food insecurity is a problem for those households that are more vulnerable within a community. Such households may not have the land resources, household manpower, health, or basic knowledge of how to use what is available to at least eat sufficiently well, feed their young children appropriately, or to lead healthy and productive lives. Urban households may receive the bulk of their income from non-farming endeavors (trading/marketing, fishing, employment), and such households need the income to purchase their household food needs. Most rural households try to grow the food they need to eat, with enough to sell to purchase supplemental foods (like sugar, salt, oil) and other basic household needs (clothing, roofing for their homes, medicines, fees for their school children, a bicycle if possible).

The Mozambique MYAPs considered here have targeted a wide range of communities – generally those to which the local district civil authorities directed them – and which are clearly made up of many households that would be considered to be above the poverty line of \$1.25/day/person. Whether or not the majority of the households supported could be considered ‘vulnerable’ would be difficult to determine, but clearly most have, until recently, been practicing agricultural and nutritional behaviors that have limited their potential. This has changed through these MYAPs. Perhaps the greatest contribution to increasing the ‘resiliency’ of these communities to unexpected ‘shocks’ (floods, drought, cyclones, etc.) has been their ability to become more efficient in the use of the resources they already have at their disposal, and in understanding how – through better nutrition practices - to lessen negative impacts on the most vulnerable among them – the infants and children under two years of age – as well as children under 5.

With food security as the primary objective of the MYAPs, then it is those activities that most directly address household needs that are the most critical in integrating agriculture with nutrition/health and sanitation objectives. It seemed evident that the most dramatic household level behavioral changes have taken place in the nutrition/health/sanitation areas of the MYAPs, and the trainings sessions given through the Mothers Groups on how to use the available food in a more balanced and regular approach (i.e. the ‘four food groups’) have gone a great way to making the targeted group of the population less vulnerable. Learning how to feed and care for their small children has been critical, and this includes basic hygiene and sanitation to as preventive measures against common diseases scourges for young children in particular. The ‘four food groups’ implies agriculture, and those elements of agriculture most directly meaningful for a healthy diet for both children and adults. The introduction of orange fleshed sweet potatoes, soybeans and sesame and how to process them for household consumption, promotion of Moringa use throughout the year (and not just during the hunger months), the production of greater quantities of maize as the building block of energy for the household – all of these and more were critical agricultural themes that mothers (and fathers) received help in making better use of, or in expanding production of. Increasing agricultural productivity of the crops already cultivated, plus some new cultivars, provides greater reserves and some additional income within all farming households. Identifying marketable cash crops (soybeans, groundnuts cowpeas, sesame, pidgeon pea) to bring in additional household income simply adds to this security, and indeed has lifted most, if not all of these households above the poverty line. Some even flourish. Farmer Association, Union/Forum, and Cooperative members, limited in number within their communities, have the potential to become increasingly well off.

Needless to say, it is the integration of health/nutrition and these key agricultural activities within the same communities, among the same targeted beneficiary groups that is necessary. Integration does not take place, or trickle down or across when these activities are undertaken separately with different targeted groups in different geographic area, which has often been the approach in the past.

## 5.0 Challenges or Missed Opportunities

### 5.1 Care Groups, Mother Leaders, and Mother Beneficiaries

FH makes a very important observation in their most recent “Mini-KPC 4 and Anthro 3 Survey Report, October 2012). It is stated “*behavior change is not a one-time activity. In contrast it requires time, effort, energy, and the development of social support systems*”, and then goes on to point to its Care Group methodology with its 1,380 Mother Leader volunteers (10 per Care Group) who all lead at least 10 beneficiary mothers (14,774 Mother Beneficiaries/PLWs). It also points to the involvement of the Community Development Committees (CDCs) in resolving both Care Group and Farmer Association challenges.

As currently organized, MYAP Care Groups (FH) – Volunteer *animadoras* (SANA) – Mother Groups – may not be sustainable, and may disappear after the MYAP ends. Communities have not yet had to exist on their own, without MYAP continuing support and interventions (for obtaining weighing scales, providing of bicycles, for paying stipends to health promoters, for continuous visits with animadoras and provision of training materials, etc.). SANA has suggested that the animadoras and mothers groups will continue to work without the guidance and leadership of the MYAP due to the great need of these services (health & nutrition) expressed by the communities.<sup>79</sup> Yes, this was certainly expressed to the consultant, and the desire was quite evident. These groups are supported by the “*Grupos de Suporte*” and CLCs (*Conselhos de Liderança Comunitário*) which will ensure the continuity of services in the communities. However this is our hope – we do not know that this will in fact happen. This is why the consultant suggests in the conclusions below a ‘phase in- phase out’

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<sup>79</sup> SANA notes that mothers are members of communities, neighborhoods, friends – where trust does exist. A case in point: whenever there is a death in the community, the residents do not hesitate to offer spontaneous support to the mourning family.

approach to such interventions that will permit a phase-out period while we can still be able to monitor impacts and step back in, if required.

FH has successfully communicated important, and useful, messages to mothers in the Care Groups, and through the Leader Mothers. Since these groups are set up as mothers with children under 2 years of age, the mothers of course have to leave the group when her child is over two years of age. Each Leader Mother's own child may no longer be under 2, but because the FH needs such leaders, these women continue on with new mothers. As a result, there is no group cohesion within these mother's groups, as they only stay together for about 2 years or less - then members have to leave, and new ones come in to keep the group at 10 mothers for each leader mother. As a result of this approach, the initial group of mothers (who may be friends and neighbors) leave and don't have a chance to build up a community group of women who can become a long-term support group, or their children who are growing older (under 5 and beyond), and many of whom will have babies and will go into yet different mothers group (having left their old one). If mothers groups were permitted to continue as a small group of women, they would also be a significant means of passing messages about vegetable gardening, about saving and loan programs, about agriculture activities, etc. The number of mothers groups could form as new mothers have babies and enter the 1-24 month old category. Clearly the approach here may be convenient for the project in collecting data about a certain age of children being weighted, and may correspond to the number of enumerators, field health and agricultural facilitators available to the project, and number of leader mothers trained.

Identifying Mother Leaders for each group of 15-20 or more mothers, who would be trained by the volunteer local community health animadoras, might be a better way to expand the number of mother's reached; it would create another level of mother leaders within each community which could promote sustainability. Certainly when asked about this, some of the mothers groups interviewed quickly said they had one or two mothers who could lead their group.

One of the 'best practices' established elsewhere in Title II DAP and MYAP programs has been through the creation of 'mothers groups' with their own mother leaders (e.g. Haiti, Rwanda, Malawi). However, if REAL impact and coverage is to be made through messaging through mothers groups, a flexible approach needs to be in place to permit mothers to form into self-selecting small groups of mothers within a tightly defined geographic area to organize for the care of their household children, with primary focus (initially) on mothers whose children are under 5 years of age. Such groups have a high potential to continue into the future as independent mother's support groups of their children and other areas as well. The fact that MYAPs have created Community Leadership Councils to support such groups certainly increases the chances that many of these will continue. If mother's groups could stay together, with their own Mother Leaders, (made up of mother friends/neighbors who like and trust each other), then they could move through the continuing aging of their children, as perhaps new ones are born, and perhaps be the ideal setting for other program interventions such as the training in vegetable gardening, saving and loan with linked micro-businesses, and agricultural activities with their children's fathers.

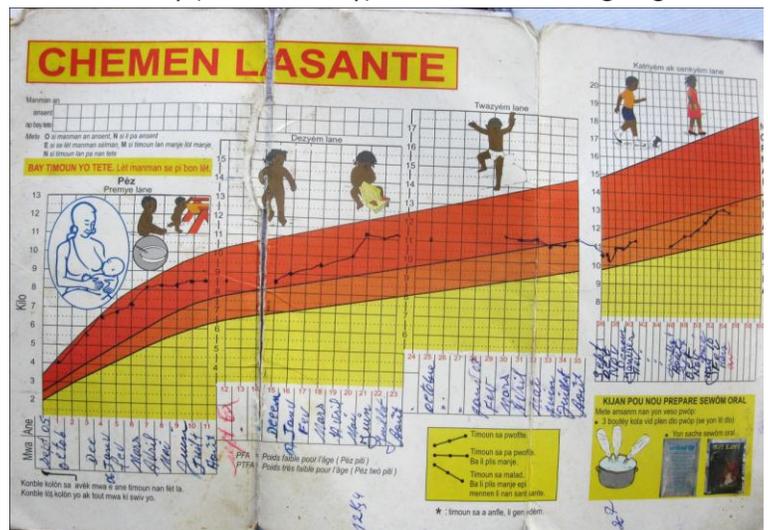
## **5.2 Bi-Monthly Growth Monitoring and the GM cards**

As noted above, the Government of Mozambique (GoM), through the Ministry of Health, does not permit anyone but its own health agents at government health clinics and hospitals to fill out the GM cards. Virtually all mothers of young children under 5 years of age have such a card for their children, given by the Health Service. So a review of such cards will show, in most cases, that while vaccinations and other treatments may be recorded on these cards, it is only those visits to the Government Health Clinic when a child is weighed that one will see any 'dots' placed on the growth card, shown below. And this is usually at birth, and perhaps if the child was ill and visited the clinic. Most of the card is blank. All the growth-monitoring records undertaken by FH, for example, over the past few years, every two months, for over 15,000 children (during the first two year

period, and some beyond) are NOT registered on these cards. Same thing for SANA with over 24,000 children being weighed each month! The MYAP volunteer local community health promoter communicates the results verbally to the mother verbally, but the mother has no record of the event on her child's GM card unfortunately, and therefore cannot follow the evolution of this child's development over those first 59 months of life.

Ideally, of course, the GOM Health Service would authorize an NGO's health workers or trained community health volunteer to fill in at least the growth monitoring chart results of the child. But in the absence of that, there is no inherent reason why the MYAPs could not have created their own cards, for each mother worked with, and identical to the growth chart, that could be filled out by the project's health workers and volunteers and left with the mothers.<sup>80</sup> This would give the mother & father greater ownership of the weighing process and personal interest in the results. Weighing sessions are already undertaken at community selected locations – perhaps the local rustic grass shelters constructed with the assistance of the MYAP to facilitate the weighing activities or other training sessions, or some other structure put up by the community itself for this purpose (as they have done for marketing agricultural commodities to district large commodity traders). This could help this activity, considered so important by mothers, to become institutionalized within their community, under their own management.

It is unfortunate that the MYAPs were not able to create growth-monitoring charts for each of the children that were being regularly weighed each month. This might have encouraged mothers to come more regularly to the GMP sessions, and been taught themselves how to interpret these charts. As it is, it is impossible to know how often a specific child has been weighed in the monthly (or bi-monthly) MYAP assisted weighing sessions. When looking at these data, by month, the number of children changes dramatically from month to month, and even the children weighed are not necessarily the same ones weighed the previous month.<sup>81</sup> The use of the color marked GM charts in other MYAP programs in other countries is also clearly one of the 'best practices' established for nutrition/health programs and has been a missed opportunity for Mozambique. An example of one such card from Haiti is provided here.



<sup>80</sup> However, it is also true that NGOs should complement the work of the host country governments and creating a parallel GMP instrument might not be the right approach. The preferable approach would be to give this issue the attention it deserves in future negotiations between a coalition of NGOs and donors with the GoM to arrive at an acceptable compromise – but one which empowers local community leaders to provide the services needed by their community members.

<sup>81</sup> See Annex 8, SANA Growth Monitoring Data tables. For the most recent 12 month period in Africare's Nacopo area data, we see a high of 937 children weighed in August 2012 down to a low of 79 children weighed in February 2013. Though not always as dramatic as this, all sites show significant variability from month to month as the data illustrates. Note: SANA notes that information at hand reveals that 823 children were weighed in Aug '13 at the Administrative Post of Nachere (include kids from various villages, including Nacopo). At this time of the year (Aug), families are engaged in the commercialization of their produces, which allows more "free" time than during times of land preparation for planting. While doing preparation field work, moms have less time at their disposal to dedicate to other activities (e.g., weighing of kids). The figure for Feb '13 is just for the village of Nacopo, not for the Administrative Post of Nachere. This explains the reduction in numbers, plus the fact that in February families are conducting field preparation work.

### 5.3 Savings and loan programs built into the mother's clubs

Multiple local community owned and managed savings and loan groups have been shown to be powerful means of providing community members with the means of initiating all kinds of micro-enterprises or meet special income needs that can lead to greater food security and well being for households. Many such groups have been formed by the MYAPs, but the potential of linking such savings and loan opportunities to the mothers of interested mothers groups has not been explored in any of the four Mozambique MYAPs, and represents a missed opportunity.

The Mozambique MYAP Savings and loans groups met by the consultant have chosen to disperse all their money at the end of each year, and start over each year. They say they need the money for 'special expenses', and so these savings groups become a means of 'forced saving' for larger expenses at the end of the year. However this means the capital in the savings group does not continue to grow, so that the number and size of the loans the groups can give to their member's remains very low and of limited value. Future programs may need to encourage 'savings groups' to retain and grow their capital from year to year so that the size of micro-loans can be increased, and that money within the group's treasury keeps working for them (and not remain in the box, where as they appropriately fear, it could be stolen).<sup>82</sup> Another 'best practice' established in DAPs and MYAPs in other countries, with best known example in Malawi with CRS, has been in the introduction of Savings and Loan programs through the mother's clubs. This provides an additional incentive for these mothers to remain together, and to branch out into micro-enterprises that will provide their households with the added income often needed during periods of increased food insecurity, or for meeting special expenses such as school fees, school uniforms, and medical expenses.

### 5.4 Fathers Groups and Gender Dynamics

Father's groups, where encountered, appeared weak and there is an open question on how effective they really are – yet the limited time spent by the consultant in each region most likely did not permit adequate appreciation for what has been achieved here. FH, for example, only introduced Fathers Groups this past year – with 49 groups created – and has stated that "*involving the fathers/husbands has been a game changer with respect to behavior change*".<sup>83</sup> The reasons for their existence would appear obvious – fathers/husbands often control family financial resources – even in the matrilineal households - and appear to lead in most of the Farmer Associations visited. Why, some men asked, do men need to go when their wives bring in the learning to the household? Perhaps the same messages could be given through farmer associations, which are made up mostly of men? Yet the very use of the term 'fathers group' probably did consciously help to link men to health/nutrition themes within many communities in a new way.

The World Vision led Ocluvella program's linking of Health Councils to each Farmer Association – with a core mother/father support team also helped to integrate agriculture to nutrition as well. SANA did not promote the creation of exclusive groups of 'fathers'. There is participation of men ('fathers') in the support groups for each *animadoras*. Additional 'fathers' do participate actively once they see the positive impact on the health status of their wives and children. Yet I suspect that most of the MYAP's contributions in gender dynamics was more organic in nature: where there are actual Mother's Groups, led by a Health Promoter and Health 'animadoras', when training sessions are held, the husbands of the women attending actually frequently sit in on what is going on anyway, just to find out what is taking place. Mothers noted that their husbands frequently ask them what they had learned in the Mothers Group sessions, and were often very helpful in

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<sup>82</sup> The consultant recognizes that existing MYAP groups are not only allowing people to develop saving habits and undertake small income activities but helping them to adopt core values (honesty, transparency, solidarity, integrity) that are fundamental for future success in VSLA activities.

<sup>83</sup> FH November 5, 2013 FY 2012 Annual Results Report, p. 8.

carrying out recommendations or lessons learned – like creating a latrine, or building dish racks near the home, helping to keep refuse in refuse pits, and removing standing water. Husbands also support their pregnant women in giving them less field/farm work during later months of the pregnancy, carrying heavy burdens, and in helping wives travel to sometimes distant health clinics for monthly check-ups (by bicycle). It would be reasonable to state that MYAP activities did contribute to positive changes in gender dynamics.

## 5.5 MYAP Data Management

MYAP data management systems were designed specifically to respond to the data needs of the MYAP Indicator Performance Tracking Tables (IPTTs) for USAID reporting requirements. The consultant believes there were far too many indicators being tracked (many with little or no data to support them from one year to the next). The data systems do not permit enquiry into baseline data for other purposes, since most household/community level data are not entered into the computer database. What is entered is often manually aggregated before entering.<sup>84</sup>

There is a great wealth of hardcopy data going back many years (to 2009) on the growth monitoring of children for example, through the Care Groups/Mother Groups or Health Councils and children of the beneficiary mothers of children < 2 years. This is true for thousands of Farmer Associations as well. However none of these time series data are entered into a computer database. They remain in hardcopy form at MYAP district offices – or within the communities themselves - with data aggregated by field agents in reports to include only the actual number of children weighed every other month (showing how many are healthy, moderately malnourished, or severely/critically malnourished, for example, over time). Yet there is no way to track the evolution of the children in the community across different months of the year.<sup>85</sup> There is no way to know if pregnant women and their babies born during the hunger season between November and February/March are more vulnerable - show greater problems in malnutrition and adequate growth - than those children born during the periods of food abundance. The data actually exists to do such analysis, but as it is not being computerized, it is not possible to do such analysis. In present hardcopy form, these data can also be easily lost or destroyed by water, fire, wind, etc. Therefore, it might be helpful to the program's assessment of impact to enter these data sets – perhaps designed as a 'special study'. The task will be large, but is feasible, and the program may consider beginning to enter their current data on a regular basis.

Questions that MYAPs cannot answer, or only provide partial indications, with their current M&E system include the following (and often depend on how data are disaggregated for analysis):

- (1) What was the degree of overlap – at the household level within targeted communities – of agriculture and nutrition/health MYAP interventions? SANA was the only MYAP that attempted to actually answer this question through a special survey.
- (2) What is the household size (man, woman, children) of all direct beneficiaries of the MAP? How many of the direct beneficiaries households of Farmer Associations, Care Groups, Mothers Groups, or Health Councils have children under 2 years of age, or under 5 years of age? In other words, what % of the beneficiary households targeted by the program actually met the objectives for the target group of the

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<sup>84</sup> For example, for reporting on growth monitoring, the total number of children weighed at a specific weighing center was recorded, with how many of these were 'green', 'yellow', or 'red'. The actual data themselves (mother's name, child's name, actual weight recorded that month – were not entered into the database). The same aggregation takes place for metric tons of corn or pigeon pea sold by a Farmer Association at the end of the year, without specific details about what specific households of that FA contributed to this total. Therefore it is not possible to track impact of the agricultural program, or nutrition program, on the evolution of a specific household.

<sup>85</sup> While these data exist, in principal, at the community level in the hands of the health promoters who is perform the weighing, the paper state on the data sheets are vulnerable to loss or damage. It is clear how long these data will be kept by the health promoters, or in what state they actually are at this time.

nutrition/health program? What was the actual size of the households worked with – and how many children did these mothers have on the average? (My random checking on this suggests that household size of MYAP beneficiaries may be much larger than the reported 5.5 persons/household from the last census is closer to 6 persons/household).

- (3) Are children born during the hunger months between November and end of March each year more likely to become stunted, wasted, or show malnourishment? Or perhaps the impact is on the mothers who are pregnant during this time and on the infants subsequently born. With exclusive breastfeeding being practiced now, it would be those children 7 months to under 5 years who would potentially be the most vulnerable during this period. Figures generated by MYAP data sets do suggest that during these hunger months, there are more cases of malnourished (yellow) and severely malnourished (red) children under 5 being weighed. What becomes of these children over time through the support of the MYAPs? Perhaps these are the children that are keeping those stunting figures high in annual surveys undertaken?
- (4) How has the weight status of the under 2 children during a given period been effected by known events (such as the outbreak of malaria or diarrhea, or period of unusually heavy rainfall/flooding, or period of unusual drought)?
- (5) Over a 12 month period, what % of children had had their growth monitored every time this could have been done. For example, where monthly growth monitoring took place, what percent of the 50 children under two (of the mothers within the mother groups) actually took advantage of the 12 weighing sessions that year? The data reviewed shows significant variability from one month to another of those weighed, but it is not clear that even those weighed are the same from one month to the next. When clinics are a distance from homes, mothers frequently only show up when they think there may be a problem. But MYAP experience shows that GMP within the communities was highly valued – as it was close – yet we cannot objectively show the rates of attendance of specific children of program mother beneficiaries.
- (6) What are the gross margins achieved by beneficiary households for the primary commercial crops supported by the program? Most of the focus was on helping farmer groups to initially become more productive and then to improve commercialization through the groups and/or forums. Much of the data for planning and producing commodities at the household levels for eventual sales were available at the community levels, including estimated production costs, but data were not consistently aggregated and analyzed to determine actual profits realized.
- (7) SANA has noted the need to understand and document the *“production and marketing plans of ...over 3,400 farmer associations” ...we can not accurately measure increases in the crops promoted by the program...Future programs with large population and geographic coverage...need to substantially increase the level of resources available to capture critical information...”*<sup>86</sup> This is true of all the MYAPs, and should include tracking data on the annual sales of commodities of FA's, Unions or Forums, and Cooperatives – including their planned production goals. Feed the Future guidelines have recommended up to 10% of program budgets be dedicated to M&E.

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<sup>86</sup> SANA Fiscal Year 2012 Annual Results Report, November 5, 2012, p. 12.

## 5.6 Misleading Aspects of Baseline and Final Populations Surveys

Households surveyed in baseline and end-of-program surveys are often simply not telling the truth about many of the key impact indicators such as exclusive breastfeeding, # of months of food security, household incomes and sales of agricultural commodities, etc. Interviewers are usually recruited for these surveys from urban young people or secondary/university students who themselves know very little about the lives of rural people in their own country. Rural households are intelligent enough to suspect that giving low values for many of these questions may increase the odds that a new project may come to their area and provide additional benefits to them – or at least they hope so.

Asking most of the high level goal and objective level impact indicators in any of the MYAP areas – after two cycles of DAPS and a five year MYAP should find most responding at close to 100% breastfeeding, use of the four food groups, being above the poverty line (prevalence of poverty), greatly reduced stunting, wasting, malnutrition, etc.<sup>87</sup> SANA's annual survey, for example, shows that exclusive breastfeeding is around 98% in the first month, but goes down in the second and third months, and it gets even lower during the 4-5 month period. FH, in its annual Mini KPC 4 Survey Results by June 2012 noted that continued breastfeeding between the ages of 12-15 months increased among those surveyed from 52% in August 2011 to 97% in June 2012; 98% of surveyed households with infants noted that they had given semi-solid, solid, or soft foods (supplemented to breast milk to their 6-23 months age children; 90% of the FH 0-6 month age babies were reported as being exclusively breastfed in 2012.

## 6.0 Conclusions: What Worked Best?

Given this review of the four USAID Title II Mozambique MYAPs, one might ask what would be the most effective way to implement future behavioral change programs with reference to food security and health/nutrition improvements for children under five years of age and their families – based on the experience of the past 5 MYAP years, and the preceding DAPs. How might a future Feed the Future (FtF) program in Mozambique best build upon this experience and what has proven to be most effective? I have tried to draw out some of the best practices from each MYAP program and suggest what a new program might look like.

The hypothesis that linking/integrating nutrition with agriculture support and training within the same households and communities will lead to greater and more sustainable impact on targeted beneficiaries is true.<sup>88</sup> A better job needs to be done however, to assemble existing data to objectively prove this. Which brings us back to how might nutrition and agriculture is best linked for greatest impact? Several criteria seem to become apparent, based on the experiences of the four Mozambique MYAPs. These are presented in the form of recommendations for future action.

- (1) **Program Design:** It is important, from the on-set of any new program, such as a Feed the Future initiative, to build upon the MYAP experiences. Current MYAPs did not intentionally see to link agriculture and nutrition activities in the same households and communities, so doing so after program implementation created challenges.

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<sup>87</sup> Review of MYAP IPTT data for these and other indicators showed remarkable adoption rates of these important nutrition/health indicators.

<sup>88</sup> This is clearly the opinion of the consultant, but is based not on just this qualitative assessment of the Mozambique MYAPs, but similar efforts elsewhere where these approaches have NOT been employed. And though largely qualitative in assessment, the consultant also believes that there is sufficient objective data to support this statement as well.

**Recommendation #1: Provide sufficient time to achieve behavioral changes, significant outcomes and impact.** Most of the Mozambique MYAPs built upon earlier DAPs – with current achievements realized over a base of almost 15 years!

**Recommendation #2: Program integration (nutrition/health and agriculture/marketing is best achieved when one organization leads the over-all effort within a defined geographic area, with partners focusing on sub-components of the over-all program, if necessary.** It is difficult enough to interact with local populations and civil authorities and agencies without having to try to coordinate activities with different organizations with different working philosophies and personnel.

**Recommendation #3: Use a simple but the same integrated approach and do not try to undertake too many initiatives in different locations. Future programs should integrate agriculture and nutrition/health interventions intentionally, with all components introduced at the same time within the same communities. This will facilitate the phase in-phase out approach suggested below.**

- (2) **Geographic Focus & Coverage:** It is important, for significant impact to be achieved, to be geographically well focused.

**Recommendation #4: Be geographically focused with the intention of achieving coverage and impact throughout the entire geographic area.**

This may mean that a Province within Mozambique is too large an area for focus, particularly if areas within other Provinces are considered important to address. This might suggest a selected number of districts to be defined. Certainly, one requirement of Feed the Future programs is geographic focus within a Zone of Influence. A limited number of districts within targeted provinces might be selected, with the intention to achieve impact within the entire district, and not simply clusters of communities in widely scattered regions of one district or province (the current MYAP case). This also greatly reduces the time and expenses spent by program technical leaders in travel to distant locations, to spend several hours and return again to home bases. Doing so would increase coverage to entire districts, and therefore be easier to encourage and integrate GoM health and agricultural services as true partners.

**Recommendation #5: Spatially map the geographical locations of all key program interventions that have a spatial address. Data acquisition should include the spatial addresses of all key program outputs to permit improved monitoring of coverage and impact. Point data should also be linked with key pertinent information about this location.<sup>89</sup> If possible, undertake this as an MYAP end-of-program special study so that future programs may build on this.**

MYAP data that could have been spatially mapped would include:

- Location of existing Farmer Associations;
- Location of Union/Forums headquarters;
- Location of Cooperatives;
- Location of Union/Forum and Cooperative commodity warehouses (and capacity)
- Location GoM health clinics or hospitals within targeted districts;
- Location (and names of) the Community Development Councils/Committees;
- Location of Mothers Groups (and their leader)
- Location of the (FAO) metal silos distributed;

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<sup>89</sup> If this is done, then someone reviewing this map can place cursor on a specific point, for example the location of a specific Farmer Association and a pop-up will show the name of the organization, the number of members, the total sales achieved in 2012, etc. For this to be possible, however, the program's database needs to be established and linked to permit such use.

- Location of boreholes created or improved
- Location of the Community Resilience Groups (for disaster preparedness).
- Location of towns/villages and roads within targeted communities
- Location of major commodity markets

Providing such information would permit program managers and planners to see at a glance the nature of the MYAP coverage and focus areas. Such mapping would also prevent the problem faced by the SANA MYAP where the expectations of building upon 1,400 DAP 2 farmer groups proved to be false, and only about 400 were ever located at the beginning of the MYAP. It would only take one experienced person, using a hand-held digitizer, to travel to MYAPS and record these x,y coordinates, and then create province or district level maps illustrating these and other MYAP level data that could be located spatially.

**(3) Targeting of Primary Beneficiaries:** It is not reasonable to consider an entire district's population to be 'vulnerable', at risk, or food insecure.

**Recommendation #6: Focus activities on an identifiable target groups within Zone of Influence of the program.**

The MYAP focus towards pregnant and lactating mothers and children under five years of age, with specific focus on children under two narrows program interventions towards the potentially most vulnerable within every community. By extension, it would be the households represented by such women and children who should also become the primary target for inclusion into activities to reduce the impact of annual 'hunger seasons' and participation in Farmer Associations – Unions – and ultimately Cooperatives (though such organizations would not be limited to these). Clearly, participation – at the community level – within a Farmer Association or even Mothers Group must be voluntary, but it is also important to keep track on those primary targets within the community in assessing how they are being impacted by program strategies. Currently, no MYAP is able to determine just how many of the households currently impacted through Farmer Associations even have children under five years of age, or pregnant women, and many of these are not directly involved in MYAP health/nutrition activities.

**(4) Technical Focus: Phase in- Phase Out:**

**Recommendation #7: Plan to spend no longer than two years within any one community, before beginning a phase out and move into new communities within the Zone of Influence.<sup>90</sup>**

If a program has a clear focus and objectives and introduces all components (health/nutrition & agriculture) of the program at the same time, it may be possible to initiate programs in a community, and within two years begin to draw down activities and phase in to new community areas – while maintaining a lighter foot print in earlier communities for monitoring purposes. No community wants a project to leave, always saying that '*there are new things to learn*' – which is true. However, if objectives are clear from the beginning, and initiated together as a package of themes, then the strategy of using local volunteers 'health and agricultural promoters' and mother's group volunteer 'health animators' should be able to continue training messages given out. This would accelerate district level coverage and wider impact.

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<sup>90</sup> This statement is made in the context of Mozambique where these targeted areas have already experienced years of previous DAPs, and the current MYAP with agricultural interventions. It takes time to organize and develop farmer associations, build trust and confidence, and then to move into forming unions and cooperatives. The nutrition/health activities however could be done within this two year window.

**(5) Technical Package:**

**Recommendation #8: Keep the technical components of the program as simple as possible, and built on what we know works best in reducing food insecurity and the nutrition/health of pregnant women and their children under five years of age.**

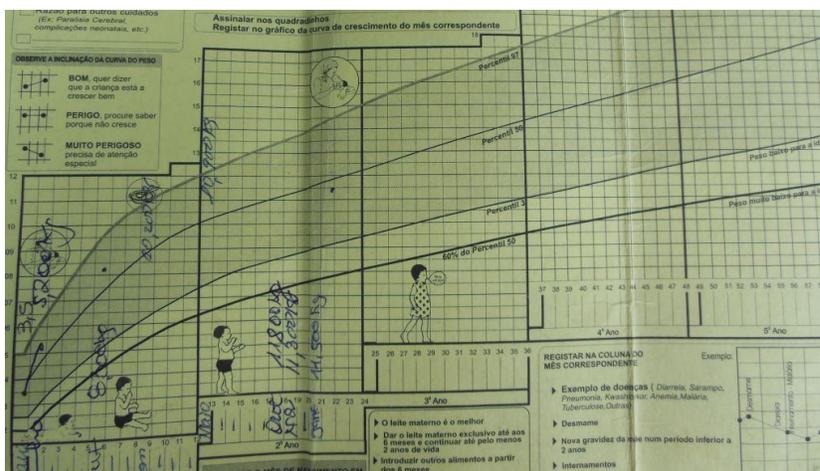
We need to resist the temptation to load up a program with additional activities that may reduce the effectiveness of the program in achieving its major objectives. Agricultural initiatives are particularly susceptible to this temptation, as there are many ‘interesting options’ that could be promoted or explored. This report outlines some of the best practices tested by MYAPs and also suggests some ways on improving on some of these, based on observations in other DAP and MYAP programs in the region (Malawi, Zambia, Uganda, and Rwanda) and elsewhere (Haiti).

**(6) Local Civil Authorities (Health & Agriculture) & Local Community Development Committees:**

**Recommendation #9: Link CDC support activities with district level health and agricultural authorities, in an effort to build capacity within the GoM civil government.**

While the process may take a bit longer, there should be close linkage with district level health and agricultural authorities. This is **not** to say that program activities should necessarily be channeled through currently often inefficient and dysfunctional health/agricultural services at district levels, but that every effort should be made, in the districts worked in, to intentionally include them as partners in every possible way to build their capacity. At the same time, the MYAPs have done an excellent job of organizing and training **local (non-government)** Community Development Councils that support the agricultural and health/nutrition activities undertaken through community volunteers (agriculture and health promoters, *animadoras*, mothers groups) within their communities. Incentives need to be developed to provide appropriate recognition and ‘thanks’ to these community volunteers.<sup>91</sup> So while building up the capacity of the local community leaders, and local volunteers in agriculture and health/nutrition, the program would also be trying to create better links between this non-government group and the district civil government.

One example of this is with the Ministry of Health Growth Monitoring Cards, which every mother receives at the birth of a child, which records all vaccinations and health related issues about the child when the mother brings the child in to the government health clinic or hospital. At this time the children are also weighed and their weight plotted on the 59-month growth chart included on the card. Looking at such cards in all MYAP programs, what strikes any



<sup>91</sup> SANA noted that some CDC’s organize special groups to help in the weeding of some of the fields of these volunteers, as a way of showing gratitude and recognition for the significant time these people give to their communities. Special award ceremonies might be considered, or special gifts given each year to outstanding contributions.

observer is that one will only find one or two ‘dots’ on the growth chart – representing perhaps the baby’s weight at birth, and then possibly a time or two when a child may have been brought to the clinic for some illness or vaccinations. Otherwise they are blank – even though the child may have been weighed each month for the past two years or more by the MYAP.

Currently, the MOH does not permit MYAPs (or a potential FtF program) to plot the weighing taken for the children within their home communities, by local volunteer health promoters. Mothers don’t know themselves how to interpret these cards, though they are easy enough to learn when used regularly by mothers in growth monitoring. MYAP monthly weight monitoring of Mother’s Group children under five, and especially under 2, are NOT recorded on these cards and therefore mothers never learn to understand and use these cards to their fullest potential. Yet these growth charts should be mostly **for the parent’s monitoring of their child**, not for the health clinic that rarely sees this child. This is an area that some kind of compromise is needed. Either a future MYAP or FtF program in nutrition and growth monitoring should create its own (color coded) growth monitoring charts (as distinguished from the GoM health service issued cards), and furnish these to parents for their own monitoring purposes, or the health service could begin to permit local project level Volunteer Health Promoters, not officially linked to the GoM, to fill in this section of the GM cards. In some countries, the equivalent to the volunteer SAVE ‘animadoras’ assist their volunteer local health promoters in this weighing and recording on such charts. A FtF program in Mozambique might consider making this a condition of the support given to local communities – if nothing else than a ‘pilot test case’ for the GoM to observe before possibly changing the policy nation-wide. The local community volunteer ‘health promoters’, who support and train the local mother ‘health animadoras’ who themselves support the community Mother’s groups of 15 or more mothers each have the potential to become a very important informal extensions of the Government of Mozambique’s health service, at limited cost.

## **(7) Mothers Groups**

**Recommendation #10: Seek to establish actual Mother Leaders within the established Mother Groups by formalizing their role within the community.** This will expand the number of leaders within each community capable of demonstrating good nutritional behaviors/practices and in verbalizing about these to friends and neighbors.

## **(8) The Way Forward?**

First of all, it is important to note that the MYAP and DAP experiences of all four MYAP programs place the leading organizations in a position to be uniquely qualified to undertake the integration of health/nutrition with agricultural activities – when food security itself is most at stake. The MYAP strategies of Community Development Councils leading local community agricultural interventions through Farmer Associations and nutrition/health activities through Community Health Councils, have been very successful in placing a potentially sustainable group of local leaders to maintain future development. The MYAPs have also done outstanding work in building on existing Farmer Associations to create Unions/Forums, and then moving some of these on to a Cooperative structure.<sup>92</sup>

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<sup>92</sup> In a recent (2011) study of impacts within the Zambezia Basin in which both Ocluvela and Osanzaya MYAPs have worked for many years now, it states that “*with the doubling of crop production, we see the average total income in all zones but one is brought below the poverty line*” (of 29,282 M/household/year) (about \$976/household/year) (Atlas for Disaster Preparedness and Response in the Zambezia Basin). These MYAPs certainly contributed a great deal to such success, and the same statement could probably be made for SANA in their targeted districts within Nampula province.

While, as noted, the MYAPs have developed two major successful approaches towards integrating – linking - agriculture with nutrition/health interventions for reducing food insecurity and reducing poverty, the approach which might seem to be the more effective one would be to adopt a somewhat modified version of the SANA approach. Here, the principal thrust would be on nutrition/health focused activities - the creation of a vast and comprehensive network of Mothers Groups (of 15-20 mothers each) – with Volunteer Mother leaders for each Mother’s Group. Within each community, these Mother’s Group households would be linked with legalized Farmer Associations organized into Unions, as undertaken by OSANZAYA, with a Cooperative structure, as also promoted by OSANZAYA made up of elected members from each of the representative Unions of the Farmers Associations. SANA’s somewhat different approach also appears highly effective. Since Farmer Associations have been established in many districts within current MYAP districts, future efforts should focus on the creation of strong Forums/Unions among the best of these FA’s within a limited number of targeted districts or Zone of Influence, with the intention of district level coverage and impact by the end of the program.

District level coverage should also be expected through the networks of Mothers Groups within Community Health Councils, with their volunteer Health Animators, and volunteer Health Promoters, led by Health Technicians who adopt and focus on extending the best of the practices tested through the MYAP experience, and which are highlighted in this report. These Mothers Groups could also be the primary focus for extending long-term savings and loan opportunities for those groups which wish to do so, and who have the flexibility to add to their membership as they desire themselves – but encouraging them to not become too large in number (25 members could be enough), and permitting the creation of new Mother’s Groups as community members might see the need. Support should be given to Savings Groups holding and increasing their capital from year to year, with ever-larger micro-enterprises anticipated and supported by the program as well (training in record keeping, business plan – however simple). Micro-enterprises are one important means of acquiring some disposable income for households to purchase special food needs during the hunger months, pay children’s school fees/uniforms, medical expenses, special foods. Future agricultural activities might limit themselves to those that directly address fresh food availability during the hunger months between November and March each year – a period when increases in malnutrition and severe malnutrition are clearly evident from current GM monthly data from each of the MYAPs. This might mean vegetable gardening through the Mother’s Groups.

With farmer households increasing their acreage and producing more – while still tied to hand farming implements – it is certain that the available household labor force will increasingly become a major constraint to future growth. Households are already using some of their increased incomes to hire labor for field clearing and weeding. Greater attention may need to be paid in the future to animal traction, since most are now planning in rows in any case. The dramatic impact on incomes for vulnerable households in Zambia through Land O’Lakes milk collection center program with small farmer intensive small dairy programs (linked to Parmalat and other firms) could also be a modal Mozambique might wish to explore<sup>93</sup>. Animals are produced that can be also used for animal traction. The jump to mechanized labor still appears unrealistic for most farmers. However, some MYAP Farmer Associations are beginning to seriously look at mechanization in tractor plowing and weeding, for example. Another major existing constraint is the ability of farmers to have access to quality seed – even something like hybrid maize – and MYAPs have begun to look at farmer groups linking with IITA and other sources of improved seed for seed multiplication and distribution.

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<sup>93</sup> In-calf heifers were provided to vulnerable household women in areas that had little experience with the traditional extensive raising of cattle (with all the bad practices associated with this). This proved to be an advantage, not a disadvantage, as households did not come with preconceived notions about cattle raising. Women are in the home more than household men, and in a better position to care for the intensive care needed by these heifers and calves born soon after. This produces manures for household vegetable gardens, very important nutritious food for household children (sour milk, milk) and household incomes that increased above \$1,200/year for each milking cow possessed (See: Swanson Final Evaluation of LOL Food for Peace DAP in Zambia, September, 2008).

It is likely that the near future will see the dramatic increase of all kinds of agricultural input suppliers focused on the forums, unions, and cooperatives that are already in existence, and the many more that will be organized in future years. The development of entire new private sector supply chains for farmer-needed inputs (through stockists) in USAID initiatives in neighboring Zambia and Uganda, for example, could provide a useful model to consider for Mozambique.

Finally, it is important to remember the need to keep a clear business focus on activities undertaken. Successful agricultural forums/unions and cooperatives need to keep the focus on their agricultural production businesses and not be drawn into undertaking activities that may draw their attention away from their core business. How they become engaged with supplying inputs to their Farmer Associations could take focus away. It might be better to permit other private sector entities to become engaged in filling this new niche (as experienced with the stockists example given above). It is always tempting to engage successful groups in undertaking new ventures, but this may not be in their best interest.

**Recommendation #11: Focus. Keep a business focus within unions/forums and cooperatives; keep focus of mother groups on the nutrition/health of their children under five years of age.**