



Wadata Makiyaya

“Thriving Pastoralists” in Hausa

June 2013 – June 2014

End-line Survey and Results

September 2014

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1 Context

Funded by USAID/OFDA, and implemented by Mercy Corps between June 2013 and June 2014, the Wadata Makiyaya program aimed to *improve food security and reduce vulnerability to shocks for agro-pastoral and pastoral households along the international transhumance corridor in the departments of Filingué and Abala*. The program supported more than 5,000 households in different areas including revitalizing or creating women's Village Savings and Loans Associations (VSLA), training on animal husbandry techniques, well rehabilitation, creation of cattle vaccination crushes, and trainings on a number of related themes. An end-line survey was conducted in June 2014 before the program close-out to compare project objectives and goal indicators with the baseline survey results. Household surveys were completed in 53% of the target villages with a total of 141 households interviewed and 34 focus group discussions facilitated.

2 Objectives and Method

2.1 Objectives

The objective of this end-line survey was to evaluate the program results focusing on the following indicators from Wadata Makiyaya's logical framework and compare them with the baseline survey results:

- Average Household Coping Strategy Index (CSI) Score
- Average Household Dietary Diversity Score (HDDS)
- Percentage of households with moderate or severe hunger (Household Hunger Scale - HHS)
- Percentage of users expressing satisfaction with vaccination crushes
- Percentage of (agro) pastoralists in seven communities who have access to an improved pastoral water source
- Percentage of financial service accounts/groups supported by OFDA that are functioning properly
- Percentage of (agro) pastoralists who applied improved fodder storage practices (since construction of demonstration units)
- Percentage of community members expressing satisfaction with the COFOBs' work

2.2 Methodology

An initial preparatory phase focused on reviewing secondary data including the Government of Niger November 2013 Vulnerability Assessment report, the annual national Early Warning System's report, market information reports, and program documents. This phase helped better design the methodology, define the limits of the end-line survey, and formulate an appropriate set of tools.

For the end-line, 53% (16 out of 30) of villages targeted by Wadata were selected. The first 10 were randomly selected and included villages where most program activities had been implemented (VSLA, fodder management training, nutritional activities, etc.). However, this selection only included 1 village (out of the 10) where the program had rehabilitated pastoral wells and constructed

vaccination crushes. An additional 6 villages were therefore included in the end-line survey to evaluate the results of those two activities. 141 households benefitting from the VSLA activities were surveyed. The confidence interval used to determine this sample size was 92% with a margin of error of 7%. In addition, 34 focus groups were conducted in the 16 villages. The number of surveyed villages per activity and survey methods used are presented in Table 1.

Table 1 : Number of villages and survey method per program activity

| Program activity | # villages | Survey method |
|---|-------------------|---|
| Vaccination crushes construction | 4 | Focus groups (men and women) and discussion with the management committee |
| Rehabilitation of pastoral wells | 4 | Focus groups (men and women) and discussion with the management committee |
| Land tenure commissions creation and training (COFOB) | 5 | Focus groups (men and women) and discussion with COFOB members |
| Cooking demonstrations | 6 | Focus groups (men and women) |
| Fodder management training | 10 | Focus groups (men and women) |
| VSLA | 11 | Household questionnaire |

2.1.1 Primary Data Collection

Using the end-line questionnaire, Mercy Corps gathered household level information relating to food security using the Coping Strategy Index (CSI), Household Dietary Diversity Score (HDDS), and Household Hunger Scale (HHS) livelihoods information. Mercy Corps used focus groups, most often comprising a dozen or so men and women, to collect community information regarding changes in the level of knowledge and practice among pastoral and agro-pastoral households in terms of activities and nutritional strategies at the community level, difficulties faced during program implementation and level of satisfaction in the support provided. The focus groups were conducted as open-ended discussions for about an hour by two field agents. Specific questions were also asked to evaluate the post-training level of knowledge of beneficiaries in fodder management and nutritional practices. The number of beneficiaries providing correct answers to each question was calculated as a percentage and results for all questions were averaged.

3 Study Results

3.1 Demographics

The household size in the target area varies between 7 and 11 members, with a slightly higher percentage of women (52%¹) compared with men. Households benefitting from VSLA activities were surveyed as part of this end-line. Most members of VSLAs in the area of intervention are

¹ Data from the Nigerien National Institute of Statistics

women and all respondents for this survey were women, 81% (114 out of 141) of which were aged between 25 and 59 years. 50% of the women were illiterate and 28% had attended Koranic schools. The number of surveyed VSLA members per village and age group is presented in Table 2.

Table 2 : Number of surveyed VSLA members per village and age group

| Village | Age 15-24 | Age 25-59 | Age 60+ |
|--------------------|-----------|------------|-----------|
| Adjiguidi | 3 | 6 | 1 |
| Gorou | 1 | 9 | 2 |
| Hamba Daouda | 0 | 10 | 0 |
| Louma | 1 | 28 | 5 |
| Sabon gari | 0 | 4 | 2 |
| Takoussa | 0 | 6 | 0 |
| Tanchiley | 0 | 10 | 4 |
| Tantigar | 0 | 9 | 1 |
| Tarkassa | 0 | 11 | 3 |
| Tchintchaye | 0 | 10 | 0 |
| Toukounous Station | 0 | 11 | 4 |
| Total | 5 | 114 | 22 |

3.2 Results linked to program goal

3.2.1 Household Coping Strategy Index (CSI) Score

The Coping Strategies Index (CSI) is an indicator of household food security used as an early warning indicator of impending food crises. The CSI measures behavior: the things that people do when they cannot access enough food. There are a number of fairly regular behavioral responses to food insecurity—or *coping strategies*—that people use to manage household food shortages. CSI scores were determined using WFP’s Vulnerability Analysis and Mapping (VAM) technique, or simply the number of times each strategy was used in the past week. A weighting of 0-4 was then attributed depending on the scale of the strategy used. On the CSI, scores theoretically could range from 0 to 168. Lower scores are better as they indicate the use of fewer coping strategies.

At baseline, the average CSI score was 43 points, which dropped to 24 by the project’s end, representing a 44% improvement (a reduction) in the average number of coping strategies used by households.

At the Wadata program close-out, just over half of surveyed households exhibited moderate (18%) and critical (34%) levels of food insecurity (see Table 3), though only 30% experience moderate (29%) or severe hunger (1%) based on the Household Hunger Score results (see section 3.2.3).

Results from the baseline and end-line surveys show a 5.5% decrease in the overall level of food insecurity (from 55% to 52%) of households exhibiting moderate and critical levels of food insecurity.

Table 3 : Percentage of surveyed households per CSI profile and commune at baseline and end-line

| CSI categories | Raw score range | Baseline Abala | Endline Abala | Baseline Filingué | Endline Filingué | Baseline Overall | Endline Overall |
|------------------------|-----------------|----------------|---------------|-------------------|------------------|------------------|-----------------|
| Acceptable food secure | <=12 | 41% | 29% | 48% | 53% | 45% | 48% |
| Moderate food insecure | >12<=28 | 49% | 24% | 42% | 17% | 45% | 18% |
| Critical food insecure | >28 | 10% | 47% | 10% | 30% | 10% | 34% |
| Total | | 100% | 100% | 100% | 100% | 100% | 100% |

Figure 1 below shows the percentage of surveyed households and the type of coping strategies they used at the baseline and end-line. Three coping strategies were used by a significantly larger percentage of households at the program close-out than at baseline:

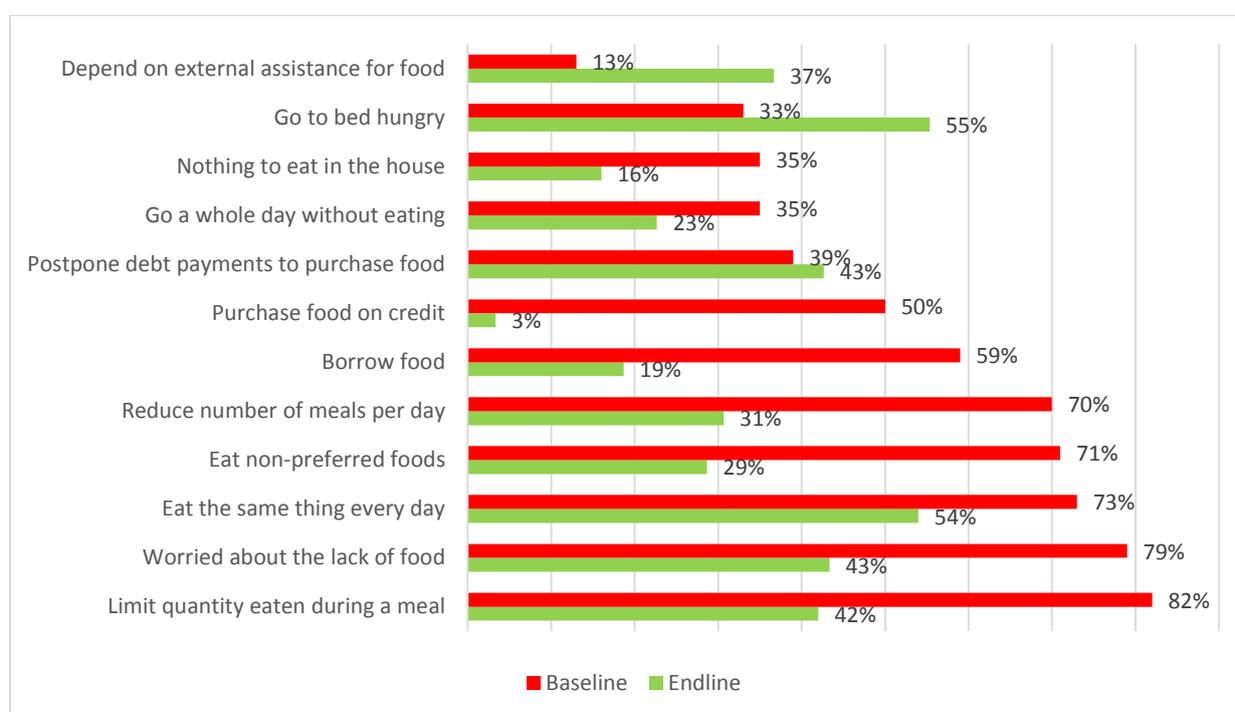


Figure 1 : Percentage of households using different coping strategies at baseline and end-line

3.2.2 Household Dietary Diversity Score (HDDS)

Household dietary diversity, defined as the number of unique foods consumed by household members over a given period, has been validated to be a useful approach for measuring household food access, particularly when resources for undertaking such measurement are scarce². Respondents are asked to recall their food consumption within the last 24 hours. There are 12 possible food groups used to measure this indicator (cereals, fish and seafood, root and tubers,

² Accessed 27 Aug, 2014. <http://www.fantaproject.org/monitoring-and-evaluation/household-dietary-diversity-score>

pulses/legumes/nuts, vegetables, milk and milk products, fruits, oil/fats, meat/poultry/offal, sugar/honey, eggs, and miscellaneous). Analyses results include the average HDDS and a classification of households in four categories of HDDS scores (very weak, weak, average and above average). The average HDDS gives an indication of the level of dietary diversity among surveyed households. The classification of households in quartiles and percentage changes in each category between the beginning and end of the program highlights the improvement or deterioration of households' food access in the intervention area.

At the baseline, the average household score was 4.4 different food groups. By the end-line, this had increased 30% to 5.7 among the 141 households surveyed – that is to say consumption increased from an average of between five and six food groups per day. The results of the baseline survey showed very low dietary diversity among surveyed households, with 19% consuming between one and two different food groups on a daily basis and 39% consuming between three and four food groups (see Table 4 and Figure 2). At the Wadata Makiyaya program close-out, 55% of sampled households consume between 5 and 6 groups of food on a daily basis and 23% consume more than 7 food groups. Surveyed households that had a very weak HDDS and consumed between one and two food groups daily at the program start have improved their dietary diversity and now show a weak HDDS of 3 to 4 food groups consumed on a daily basis. Similarly, households that had a weak HDDS of three to four during the baseline survey now have an average dietary diversity of 5 to 6 groups of food consumed daily. The commune of Filingué shows a better progression of households with average and above average dietary diversity than the commune of Abala with an 85% increase (from 46% to 85%) in Filingué compared with a 72% (from 32.5% to 56%) increase in Abala.

Table 4 : Household dietary diversity score breakdown per commune at baseline and end-line

| Commune | Abala Baseline | Abala Endline | Filingué Baseline | Filingué Endline | Total Baseline | Total Endline | % change |
|--------------------------|---------------------------|--------------------------|------------------------------|-----------------------------|---------------------------|--------------------------|-----------------|
| Very weak | 25% | 0% | 16% | 0% | 19% | 0% | -100% |
| Weak | 42.5% | 44% | 38% | 15% | 39% | 22% | -44% |
| Average | 15% | 38% | 26% | 61% | 23% | 55% | +144% |
| Above Average | 17.5% | 18% | 20% | 24% | 19% | 23% | +17% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | |
| | | | | | | | |
| | | | | | | | |

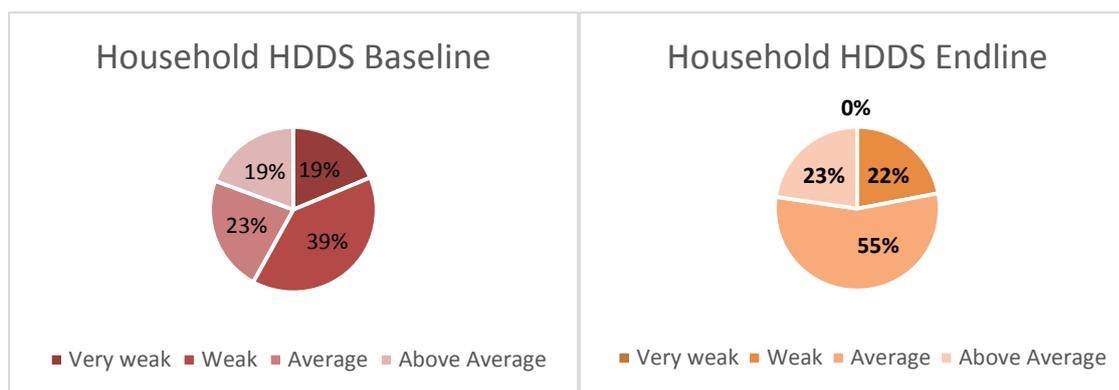


Figure 2 : Percentage of households per dietary diversity category at baseline and end-line

Households with very weak and weak dietary diversity scores tend to have a poor diet, consisting of cereals (mainly millet), green leafy vegetables (Baobab), and occasionally oil and condiments (see Table 5). As scores increase, nutrition is improved with more diversified foods, including milk, legumes (cowpea), meat, fruits rich in vitamin A (i.e. mango available between May and August), tubers (cassava flour), or sugar.

Table 5 : Food consumed by more than 50% of the households in each quartile during the baseline and end-line surveys

| Very Weak at Baseline (1 or 2) | Very Weak at Endline (1 or 2) | Weak at Baseline (3 or 4) | Weak at Endline (3 or 4) | Average at Baseline (5 or 6) | Average at Endline (5 or 6) | Above Average at Baseline (7 or more) | Above Average at Endline (7 or more) | White tubers | Legumes |
|--------------------------------|-------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------------|--------------------------------------|---------------------------|------------|
| | | | | | | | | Vitamin A-rich fruits | Sugar |
| | | | | | | | | Vitamin A-rich vegetables | Meat |
| | | | | Milk products | Milk products | Milk products | Milk products | vegetables | vegetables |
| | | Miscellaneous (including spices) | Miscellaneous (including spices) | vegetables | vegetables |
| | | Oil | Oil | Oil | Oil | Oil | Oil | vegetables | vegetables |
| Green leafy vegetables | | Green leafy vegetables | Green leafy vegetables | vegetables | vegetables |
| Cereals | NA | Cereals | Cereals | Cereals | Cereals | Cereals | Cereals | vegetables | vegetables |

3.1.1 Household Hunger Scale (HHS)

The Household Hunger Scale (HHS) is a simple indicator to assess household hunger in food insecure areas. The HHS consists of three questions and three frequencies (e.g., rarely, sometimes, often) that, when administered in a population-based household survey, allows for estimating the percent of households affected by three different severities of household hunger over the last 30

days: 1) Little to no household hunger; 2) Moderate household hunger; and 3) Severe household hunger³. The three indicators of this are:

- No food in the house due to lack of means,
- Need to go to bed hungry,
- The need to go a day without eating.

At the end-line, 70% of surveyed households experienced little or no household hunger, 29% moderate hunger and 1% severe hunger (see Table 6). The percentage of households with severe hunger decreased from 26% to 1% and moderate hunger increase from 9% to 29% during the program life. Almost a third (30%) of surveyed households continues to experience hunger though the severity was reduced from severe to moderate.

Table 6 : Number and percentage of households per HHS profile at baseline and end-line

| HHS Profile | Number of Households Baseline | Number of Households End-line | % Baseline | % End-line | % Change |
|-------------------------------|-------------------------------|-------------------------------|-------------|-------------|----------|
| Little or no household hunger | 95 | 98 | 64% | 70% | +9% |
| Moderate household hunger | 14 | 41 | 9% | 29% | +222% |
| Severe household hunger | 39 | 2 | 26% | 1% | -96% |
| Total | 148 | 141 | 100% | 100% | |

While CSI scores can reflect different cultural practices, the three questions that inform the HHS are applicable across different contexts to give a more standardized view of food insecurity or hunger. However, it should be noted that this endline evaluation was conducted at a time of year nearing the annual lean season (July), which may have contributed to the high levels of hunger observed.

3.3. Results linked to program objectives

Table 7 below presents a summary of the indicators linked to program objectives surveyed as part of the end-line and their levels at the program close-out.

Table 7 : Results for the indicators assessed as part of Wadata end-line survey

| Logframe indicator | Baseline | End-line |
|---|---------------------------------|--|
| % of users expressing satisfaction with vaccination crushes (time gains and injury risk minimization, etc.) | N/A | 100% of beneficiaries expressed their satisfaction during the focus groups |
| % of (agro) pastoralists in 7 well communities who have access to an improved pastoral water source | 627 (average number of animals) | 48% increase in the number of animals accessing rehabilitated wells per day 100% of surveyed households had access to |

³ http://www.fao.org/fileadmin/user_upload/wa_workshop/docs/HH_Hunger_Scale.pdf Accessed Aug 27, 2014.

| | | |
|--|-------------------|---|
| | using well daily) | an improved water source, or approximately 1,050 people. |
| % of (agro) pastoralists who applied improved fodder storage practices (since construction of demonstration units) | N/A | 86% of surveyed beneficiaries used improved fodder storage practices taught by the program |
| % of financial service accounts/groups supported by OFDA that are functioning properly | N/A | 100% of surveyed VSLAs continue their activities at the program close-out |
| % of community members expressing satisfaction with CFOB's work | N/A | 40% of villages are satisfied with their COFOB. These are COFOBs that have already resolved conflicts and issued land titles. |

Vaccination crushes and pastoral wells

The Wadata Makiyaya program constructed 9 vaccination crushes and rehabilitated 7 pastoral wells in the intervention area. Focus groups were conducted with men and women in 4 villages as part of the end-line survey. All beneficiaries expressed their satisfaction with the quality of the works and management systems put in place through the creation and training of crushes or wells management committees. Beneficiaries declared that the construction of the crushes reduced by 3 hours on average the time they had to wait to have their animals vaccinated, and the rehabilitation of wells reduced the time needed to fetch water or provide water for their herd by an hour. 35,487 animals were vaccinated during the last government-led vaccination campaign at the beginning of 2014 that benefitted 5,069 households. 32 herds or 1,253 animals use the pastoral wells on average on a daily basis, which represents a 48% increase compared with the baseline. Based on the discussions held with the wells management committees, an estimated 7,350 individuals (150 households per well) benefit from the rehabilitation of the seven pastoral wells. Discussions were also held with the well management committees during the survey. All had organized one to two meetings in the last two months, focusing mainly on the collection and management of fees to ensure the maintenance of the rehabilitated infrastructures.

Fodder management

Focus groups were conducted with men and women in 10 of the 30 villages where trainings on improved fodder storage practices were conducted. Questions were asked to beneficiaries to assess their level of knowledge and practice. 99% of surveyed beneficiaries understood and remembered the techniques learnt and 86% had put them into practice. The difference comes from 2 villages (out of 10) in which the techniques were unsuccessfully applied, resulting in fodder that the animals didn't consume.

Village Savings and Loans Associations

34% (17 out of 50) of the VSLAs created and trained under the Wadata Makiyaya program were surveyed as part of this end-line. All of them continue their savings and lending activities at the end of the program. 141 women, members of those groups, were interviewed and expressed their satisfaction with the savings and lending service offered by the VSLAs. 67% of surveyed members received between one and three loans since the start of the lending cycle five months prior to the end-line. This is a 56% increase from the 43% of surveyed beneficiaries who declared that they used to take out loans with merchants in the community prior to the program. Loans taken out which were used to develop income-generating activities and household revenue increased from 41% before the start of the VSLA activities to 77% (73 out of 95) at the program close-out, (see Table 8). The rest (23%) were used to cover household expenses or emergencies.

Table 8 : Percentage of beneficiaries receiving a loan, value, use and reimbursement rate

| Loan use | % beneficiaries | Average loan value in \$ | Reimbursement rate |
|--------------------------|-----------------|--------------------------|--------------------|
| Small commerce | 32% | 37 | 89% |
| Household expenses | 16% | 28 | 59% |
| Donut selling | 11% | 28 | 88% |
| Food processing | 6% | 16 | 89% |
| Vegetable selling | 1% | 31 | 40% |
| Crafts selling | 1% | 31 | 100% |
| Wood or charcoal selling | 1% | 21 | 100% |

Land tenure commissions (COFOB)

Five land tenure commissions (or COFOBs) out of the 20 established during the program life were surveyed as part of this end-line. Focus group discussions were conducted with the members of the COFOBs themselves and with the community. 60% (3 out of 5) of land tenure commissions hold meetings on a regular basis, one per month on average. All COFOBs organized between one and two sensitization campaign on land transactions recording. 20% of COFOBs mitigated conflicts between farmers or delivered land transaction certificates (7 transactions were recorded). Despite the training provided by the program, 40% of COFOBs expressed a lack of capacity to fulfill their role. Focus group discussions were also conducted with members of the community on the perception they have of their COFOBs. All beneficiaries declared understanding the COFOBs' roles. 40% are satisfied with the work of their COFOB, especially the ones in Tanfadara and Badak Adouwoyi where land conflicts have already been resolved and COFOB members were seen as motivated. The other COFOB will continue to be supported under the MADARA program but are already well known by the community, which is an encouraging sign just a few months after their creation.

4 Conclusion

The Wadata Makiyaya project led a package of recovery activities that helped communities of the Filingué and Abala departments mitigate the effects of failed harvests through support to savings groups, retaining livestock assets and short term income via cash for work. In spite of a weak harvest over the 2013-2014 season, Wadata Makiyaya communities showed modest increases in food security thanks to the interventions of the program.