



FINAL REPORT

Program Title: *Strengthening recovery and resilience after the 2012 food crisis and its ongoing consequences, and addressing malnutrition in return areas of Eastern Chad*

Start/End Dates: *01/June/2013 – 31/May/2014*

Total Number of Beneficiaries Targeted (Individuals)	24,774
Total Number of IDP Beneficiaries Targeted (Individuals)	2,477

Total Number of Beneficiaries Reached (Individuals)	25,176
Total Number of IDP Beneficiaries Reached (Individuals)	2,136

*CHAD, Ouaddai Region, Assounga Department,
Adre Prefecture, Bardé and Kado Cantons*



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1. Program Summary

Sector Name:	<i>Agriculture and food security</i>
Objective:	<i>To help beneficiaries recover from past crises through a reinforcement of household agricultural resources</i>
Dollar Amount Requested:	402,037 USD
Number of People Targeted:	24,522 persons
Number of Returnees Targeted:	2,452 persons
Achievement - May 31, 2014	24,606 persons (2, 098 returnees)
Geographic Area(s):	<i>Chad – Ouaddai Region – Assounga Department – Adre Prefecture – Hadjer-Hadid and Borota Sub-Prefectures – Barde and Kado Cantons</i>
Keyword(s):	<i>Livestock, Livelihoods, Climate</i>
Sub-sector Name:	<i>Improving agricultural production / food security</i>
Indicator 1:	<i>Projected increase in number of months of food self-sufficiency due to distributed seed systems/agricultural input for beneficiary households (+ 3 months)</i>
Achievement - May 31, 2014	+2,9 months
Indicator 2:	<i>Number of people benefiting from seed systems/agricultural input activities, segregated by sex (21,600 persons, 50% women, 50% men)</i>
Achievement - May 31, 2014	20,982 persons– 56% women / 44% men (97% of the target) 2,098 returnees
Sub-sector Name:	<i>Livestock</i>
Indicator 1:	<i>Number of people benefiting from livestock activities, disaggregated by sex (2,922 beneficiaries, 100% men)</i>
Achievement - May 31, 2014	3,624 beneficiaries (100% men) : 3,594 breeders + 30 Veterinary auxiliaries (100% of the target)
Sub-sector Name:	<i>Veterinary medicines and vaccines</i>
Indicator 1:	<i>Number of veterinary interventions (60,000 treatments and/or vaccinations).</i>
Achievement - May 31, 2014	103,226 veterinary interventions - (172% of the target)
Indicator 2:	<i>Number of animals treated or vaccinated (30,000 heads)</i>
Achievement - May 31, 2014	33,355 heads vaccinated - 2,583 heads treated (120% of the target)

Sector Name:	<i>Nutrition</i>
Objective:	<i>To contribute to reduce the morbidity and mortality due to malnutrition of children under 5 and pregnant and lactating women</i>
Dollar Amount Requested:	297,963 USD
Number of People Targeted:	252 patients expected (23,257 children under 5 years targeted)
Number of Returnees Targeted:	25 patients expected (2,325 children under 5 years targeted)

Achievement - May 31, 2014	<i>From June 2013 to May 2014: 570 patients admitted - (226% of the target)</i>
Geographic Area(s):	<i>Chad – Ouaddai Region – Assounga Department – Adre Prefecture – Hadjer-Hadid, Borota, Adre and Molou Sub-Prefectures – Barde, Kado, Guergne and Molou Cantons</i>
Keyword(s):	<i>N/A</i>
Sub-sector Name:	<i>Management of Severe Acute Malnutrition</i>
Indicator 1:	<i>Number of health care providers and volunteers trained in prevention and management of SAM, disaggregated by sex and age (8 persons (15 – 49 years, 30% women, 70% men)</i>
Achievement - May 31, 2014	<i>13 persons - (125 % of the target) - 3 women/10 men</i>
Indicator 2:	<i>Number of sites established/rehabilitated for inpatient care</i>
Achievement - May 31, 2014	<i>1 site - (100% of the target)</i>
Indicator 3:	<i>Number of people treated for SAM, disaggregated by sex and age, 252 cases (51 of 0-11 months; 201 of 1-4 years)</i>
Achievement - May 31, 2014	<i>570 under 5 children treated for SAM with complications - 227 cases of 0-11 months - 343 cases of 1-4 years</i>
Indicator 4:	<i>Rates of admission (coverage is >60% in rural areas), default (<15%), death (<10%), cure (75%)</i>
Achievement - May 31, 2014	<i>Rates of admission = 60%. Coverage is 218%¹ in rural areas (SQUEAQ Survey) Average rates from June 2013 to May 2014: - default: 1,3% - death: 3,8% - cure: 94,7%</i>

2. Context Evolution

2.1 Security

The security situation has remained calm during the whole period of implementation of the project. However, security context has been constantly monitored, as NGOs might still be targeted by criminals, especially during the lean season. Close collaboration with authorities and with other NGOs facilitates information sharing and security management. A vigilant eye has been kept on the tensions in neighboring Darfur, where the security situation remained unstable in 2013. Recurrent fights happened between militias in 2013, leading to some incursions of the militias into Chad.

PU-AMI took preventive actions to guarantee the security of its beneficiaries and staff. All referring from the health areas located near the Sudanese border were systematically carried out by two vehicles in convoy. Besides, PU-AMI paid a lot of attention to security alerts and events in the intervention area. Moreover, close and regular communication with local authorities and local humanitarian partners were implemented all along the project to monitor the security context.

¹ The coverage rate is calculated by the number of admissions divided by the number of expected cases. This rate is particularly high because the number of expected cases does not include the number of expected cases coming from areas outside the targeted area (cases transferred from IDPs' camps and from Sudan). Also, the prevalence rate calculated by the SMART survey conducted by UNICEF and the Chadian Ministry of Public Health in August 2013 has most likely worsened, misrepresenting the number of expected cases. For information, PU-AMI organized a SQUEAQ survey for SAM in October 2013 and the coverage rate was calculated at 41.7% from March to September 2013.

2.2 Agriculture

The post-harvest survey completed in January 2014 (see Annex 2) offered greater visibility on the household's grain production. In October 2013, the National Office of Rural Development (ONDR) announced a rainfall deficit of 234 mm as compared to 2012. Cereal deficit is estimated at 26% as compared to the deficit in 2012, considered as a "near normal year". Due to low rainfall, each household has lost on the average the production of one moukhama² (approximately 123.27 kg). This induces an earlier and therefore longer lean period. In April 2014, according to PU-AMI post-harvest survey, 55% of households in the area had exhausted their grain stock and entered the lean period, while in a normal year this rather happens in June or July. To face this shortage, food aid programs were implemented by humanitarian partners (WFP, Chadian Red Cross) in July 2014.

2.3 Livestock

During the last three months of the project, the rainfall deficit had concrete effects on livestock. Indeed, the low rainfall has led to a low regeneration of the herbaceous cover, to the early draining of waddis and to the earlier arrival of transhumant cattle, causing tensions between breeders and sedentary farmers in the management of resources (water and pasture). The consequences are visible (essentially low body conditions), making livestock more vulnerable to epizootic such as anthrax and pasteurellosis; it also has a negative impact on female fecundity.

2.4 Nutrition

In Ouaddaï region, Malnutrition rates remain high despite an apparent improvement (18,3% of Global Acute Malnutrition (GAM) in August 2013 and 9,6% in January 2014) according to the SMART survey conducted by UNICEF and the Ministry of Public Health³. However, this survey is based on national figures, and an additional SMART survey conducted in 2014 should soon allow a sharper analysis of the malnutrition rates in Ouaddaï. Management of malnutrition relies essentially on external actors, with only 12 health centers managing Severe Acute Malnutrition (SAM) and Moderate Acute Malnutrition (MAM) cases among 16 in the whole district in 2013, and limited service for the referring of complicated cases to the Therapeutic Feeding Center (TFC) of the district hospital. Since January 2014, the 16 health centers of the district have access to Ready-To-Use Food (RUTF) made available by UNICEF, but it remains difficult for the 5 health centers that are not supported by PU-AMI to manage SAM and MAM cases. This is mainly due to their lack of qualified human resources and basic knowledge of nutritional issues.

3. Program achievements

Sector 1: Agriculture and food security

Sub Sector 1: Seed system and agricultural inputs

Beneficiary selection and sensitization

3,500 vulnerable households (21,000 individuals) were identified in **228** villages in the districts of Bardé and Kado (estimated IDPs: 350 households (10%)). The selection of beneficiaries was carried out in close collaboration with the authorities and committees of IDPs. To improve the transparency of the process and the acceptance of the project, the population and the authorities were made aware of the project objectives, and of the criteria for the selection of beneficiaries.

The selection of beneficiaries was done in 2 steps:

Step 1: It was requested from the authorities (head of villages and village elders) to establish a list of vulnerable households in their area, according to the project criteria. These criteria were explained well enough in advance to the authorities.

Criteria of selection:

- Households who have reached the lean period in April;

² One moukhama (mks) = 0,58 ha.

³WHO Emergency thresholds are established at 15% of GAM. However, results of the SMART surveys are only available per region (Ouaddaï), which encompass different situations in terms of nutrition and access to food or water access. Thus, this "global result" does not allow humanitarian partners to have data desegregation per district. The next SMART survey, planned in August 2014, will provide malnutrition rate per district.

- No cattle (except for one donkey and one poultry or one goat);
- Flimsy housing;
- Households having an annual agricultural income under 250,000 XAF, without complementary income;
- Access to land;
- Experience of agriculture;
- At least one member physically able to work;
- Women head of families with dependent family members;
- Households with elderly, handicapped or extremely vulnerable persons;
- Households not already receiving agricultural help from another NGO;
- Households with debts.

Step 2: Based on the lists provided by the authorities, PU-AMI teams investigated individually every household to check their level of vulnerability and to validate the selections. To avoid any bias in the pre-selection made by the heads of villages, the questionnaire asked especially if the investigated household includes any relatives of the village chief.

The counting of these individual investigations led to the production of lists of beneficiaries.

Table 1 : Seeds distribution beneficiaries breakdown by area and gender:

ZONE	Distribution sites	Total beneficiaries	Number of women	Number of men	% women	% men
Kado	Ambeyoung	384	179	205	47%	53%
	Goungour	600	313	287	52%	48%
	Nounougaye	146	65	81	45%	55%
	Borota	668	464	204	69%	31%
	Tembeli farida	672	408	264	61%	39%
	Nakoulouta	213	99	114	46%	54%
Bardé	Goz bagar	347	209	138	60%	40%
	Goundiang	122	59	63	48%	52%
	Allacha	133	76	57	57%	43%
	Hilé deyé	112	47	65	42%	58%
	Goz louban	100	39	61	39%	61%
Total	11 sites	3,497	1,958	1,539	56%	44%

Source: PU-AMI distributions lists (see also Annex 3)

Distribution facts and monitoring

The distribution took place in the first decade of July 2013 in 11 sites in Kado canton and in south Barde canton (see Annex 3). Each beneficiary received **20 kg of groundnut seeds**.

For the implementation of the groundnet seeds distribution, 11 distribution sites spread through the entire area were selected (in Ambeyoung, Goungour, Nounougaye, Borota Tembeli Farida Nakoulouta, Goz bagar, Goundiang, Allacha, Hile Deye and Goz lobane). These sites were chosen to avoid excessive movement on the part of beneficiaries, but also to avoid the gathering of excessive number of people.

Table 2 : Sites locations and number of beneficiaries

Canton	Site	Number of villages/site	Number of households represented
Kado	Ambéyoung	19	384
	Gongour	33	600
	Nounoungaye	13	146
	Borota	43	668
	Tembeli Farida	49	672
	Nakoulouta	13	213
Bardé	Gozbagar	22	347
	Goundiang	10	122
	Allacha	9	133
	HiléDéyé	8	112
	GozLobane	9	100
Total	11	228	3,497

Source: PU-AMI Distribution lists

Of the 3,500 beneficiaries households initially identified three absentees were counted. 3,497 received 20 kg of groundnut seed per household.

According to distribution monitoring survey:

- 90% declared they were satisfied with the quality of seeds.
- 10% declared a better quality of seeds would allow greater production.
- 97% declared they were satisfied with the organization of the distribution and the targeting of distribution sites close to their villages.
- 45% declared they were satisfied with the quantity of seeds distributed
- 55% declared they would have appreciated a larger quantity of seeds distributed.



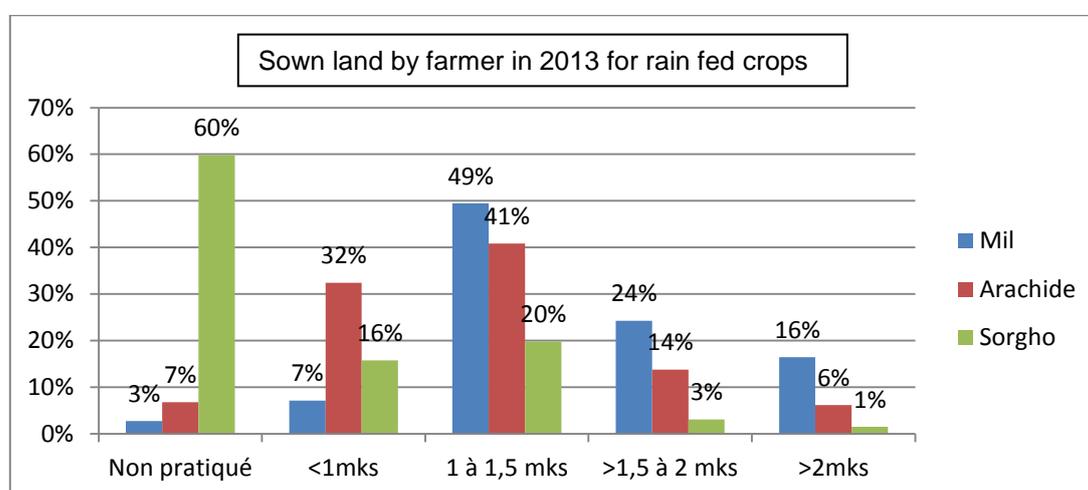
Groundnuts distributions in Bardé Canton (July 2013)

Monitoring of food crop seed cultivation

The agricultural cycle was slightly delayed due to the disruption of rainfall. Deficit was estimated by the regional office of agriculture to be around -234mm compared to the 2012 cropping campaign. A post-harvest survey was conducted in December 2013 in the cantons of Kado and Bardé on a representative sample of 742 households (see Annex 2). The survey focused on three speculations: sorghum, millet and groundnuts. The results revealed that:

- 50% of the households sown an area of between 1 and 1.5 mks for each speculation.
- 20% of the households sown more than 1.5 mks.
- 32% of the households sown less than 1 mks.
- The follow-up of sowing shows that around 86% of vulnerable households have sowed all distributed groundnut seeds.
- 11% of the households declared they did not sow all the seeds because of the lack of rainfall.
- 2% of the households declared they did not have any plow to prepare the soil.
- 1% of the households declared they use a part of the seeds for consumption.

Figure 1 : Sown land by farmer in 2013 for rain fed crops



Source: PU-AMI Post-harvest survey (December 2013)

The time lag of rainfall and sowing, and the abrupt rainfall that occurred between September and October 2013 (during the period of grain maturation) have resulted in a significant decline of grain yields in 2014.

Conservation and storage systems for agricultural production

In order to limit the losses caused by the bad storage of food crop productions, storage and conservation techniques have been spread through the mobilization of community relays. Villages that did not benefit from training sessions in 2012 were selected during this project to improve their practices.

These techniques of storage and conservation included:

- Storage in granaries;
- Individual storage;
- Good practices of food stock management.

13 training sessions were organized and 113 relays mobilized. Relays' substitutes and other interested people were present too. A book has been created and distributed to them during session.

The training survey carried out after each session shows that 100% of the relays were satisfied with the quality of the training, and undertook to pass on what they had learned.

However, they explained their needs in terms of training on the following topics:

- Techniques to improve market gardening production.
- Techniques to improve crops husbandry.

Table 3: Board training sessions in crop conservation and storage systems

Date of training	Training site	Number of relays	Number of participants (relay's substitute, other)
13/09/2013	Borota	12	37
11/09/2013	Foukougoung	11	32
19/09/2013	Birkandji	5	18
24/09/2013	Tondong	7	26
11/09/2013	Tembeli Farida	15	31
06/09/2013	Damiré	4	8
06/09/2013	Tembeli Farida	3	10
30/08/2013	Nounougaye	10	20
04/09/2013	goungour	11	19
28/08/2013	Ambéyoung	11	24
26/08/2013	Damiré	6	26
28/08/2013	Nakoulouta	5	7
30/08/2013	Goungour	13	21
Total		113	279

Source: PU-AMI Field reports (2013-2014)

Networking between producers and chain operators

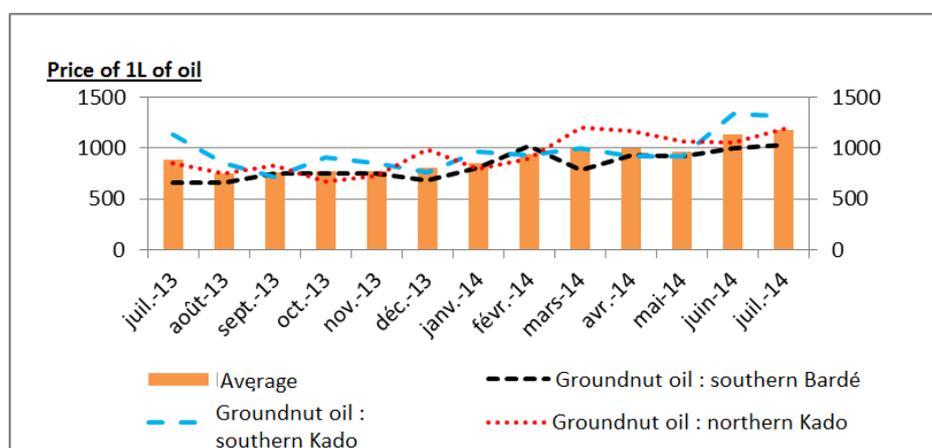
In September 2013, fifty community volunteers were sensitized and a network between them and transformation structures was established to facilitate the selling of groundnut production. These community volunteers play a central role in connecting groundnut farmers with transformation facilities of their respective areas. As a result, an important part of the groundnut production was transformed locally.

The groundnut production harvested in November 2013 was easily sold on the market, since wholesalers were informed of the increase in production and therefore ready to purchase big amounts of groundnuts. PU-AMI only acted as a facilitator and did not interfere in the signature of contracts between farmers and wholesalers. A too important involvement of PU-AMI might have complicated the exchanges for the years to come.

The prices of groundnut oil varied over time, depending on the area. At harvest time (November 2013) the oil liter was sold at 750 XAF on average. The diagram below shows that the price for groundnut oil can reach 1,200 XAF on average. The networking between producers and transformation structures can thus allow important margin for the producer while it generates profits for the transformers as well.

The diagram below shows the evolution of prices by region and by month from July 2013 to July 2014.

Figure 2 : Groundnut oil (1L) prices variation



Source : PU-AMI food security database

Post-harvest monitoring

2013 rainy season was characterized by low rainfall (234 mm less than in 2012, ONDR data) which had a negative impact on grains yields. A post-harvest survey (see Annex 2) was conducted between December 2013 and January 2014 on 742 households, in 67 villages of Bardé and Kado cantons.

The post-harvest survey estimated that compared to 2012 (considered a good year in the region), each household had lost on the average the production of one moukhama (0.54 ha) of plowed land, (123.27 kg of grain), because of the water deficit in this area.

Results showed a groundnut shortage of 31% as compared to 2012, considered a good year.

- ⇒ Average yield per beneficiary household is 462kg/ha against 643kg/ha in 2012;
- ⇒ The average cultivated field is 0,41ha in 2013, against 0,51ha in 2012.

The low rainy season had obvious consequences on the production of groundnuts.

Table 4 : Months of self-sufficiency (calculation methodology)

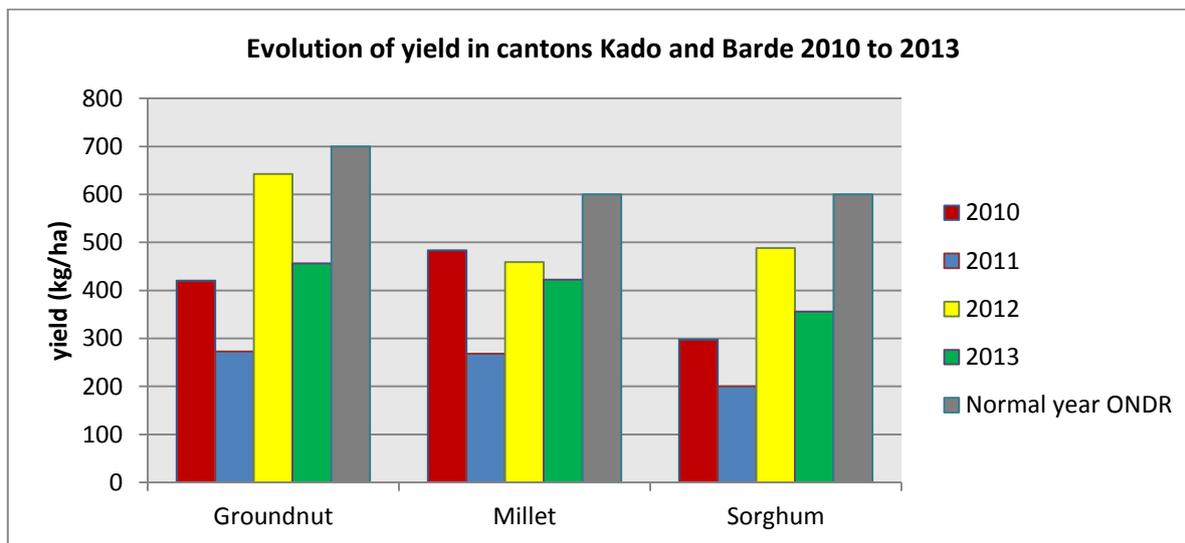
Average harvest (Kg/ha)	Average planting (ha)	Average production (Kg)	Average sold production (71%)	Groundnut average price	Average expected income (FCFA)	Months of self-sufficiency
461,77	0,41	189,33	134,42	300	40326	2,9

Source : PU-AMI calculation methodology (see also Annex 1)

Basis of calculation for number of months of self-sufficiency allowed by groundnut production (used in the post-harvest survey):

- 71% of the production is sold;
- the average selling price for groundnut is 300 XAF / kg;
- the average cost of a basket of household (or food basket) is 14,000 XAF / month.

Figure 3 : Evolution of yield in cantons Kado and Barde 2010 to 2013



Source: PU-AMI post-harvest survey (December 2013)

Performance in 2013 according to the post-harvest survey:

- ⇒ Groundnut: 456.055 kg / ha, 31% deficit compared to 2012 but a gain of 2% compared to the last 3 years;
- ⇒ Millet: 422.56 kg / ha, 9% deficit compared to 2012 but a gain of 5% compared to the last 3 years;

⇒ Sorghum: 356.24 kg / ha, 37% deficit compared to 2012 but a gain of 8% compared to the last 3 years.

Compared to a normal year, yields are generally lower in 2013 from 40 to 50% (ONDR data).

The cereal deficit is estimated at 26% as compared to the yield in 2012, cited as a good year in the region (figures are structurally lower than ONDR standards). However, there is a slight excess of 5% on grains as compared to the last 3 years (Yields in the area are structurally lower than ONDR theoretical yields data).

Sub Sector 2: Livestock

Creation of Veterinary Pharmacies

In January 2014 an agreement on the training of livestock auxiliaries was established between PU-AMI and the Ouaddai delegation of livestock, located in Abéché.

A first phase dedicated to raising awareness amongst authorities and stockbreeders took place during three weeks in the northern part of canton Kado. Then, 30 new auxiliaries were identified with the support of local communities and selected according to their technical knowledge of cattle activities: 17 in Goungour and 13 in Ambeyoung.

A training phase followed the selection of auxiliaries. They were trained on basic veterinary care by the delegation of livestock and by PU-AMI; this training took place from February 18 to 25, 2014. The theoretical part lasted 5 days and the practical one 3 days. A kit composed of an accounting book and of a manual was given to each auxiliary.

The training themes were centered on the role of veterinary auxiliaries, common livestock diseases, and treatments to provide.

Creation of management committee for each Veterinary Pharmacy

After an identification and awareness phase, two management committees were selected in the northern part of canton Kado. Each management committee is composed as follows:

- A President and his deputy;
- A Secretary and his deputy;
- A Treasurer and Assistant;
- Two Advisors;
- A Buyer and his deputy.

Training sessions took place to prepare the management committees to their future role. The training topics focused on the role of a Veterinary Pharmacy and the comprehension of the basic texts (Regulations and Rules of Procedure). They were also trained to management and accountancy (book of cash, stock) and eventually the creation of a simplified business plan.

Note that the 30 trained auxiliaries are members of the Veterinary Pharmacy.



Livestock Auxiliaries Training, Goungour, February 2014

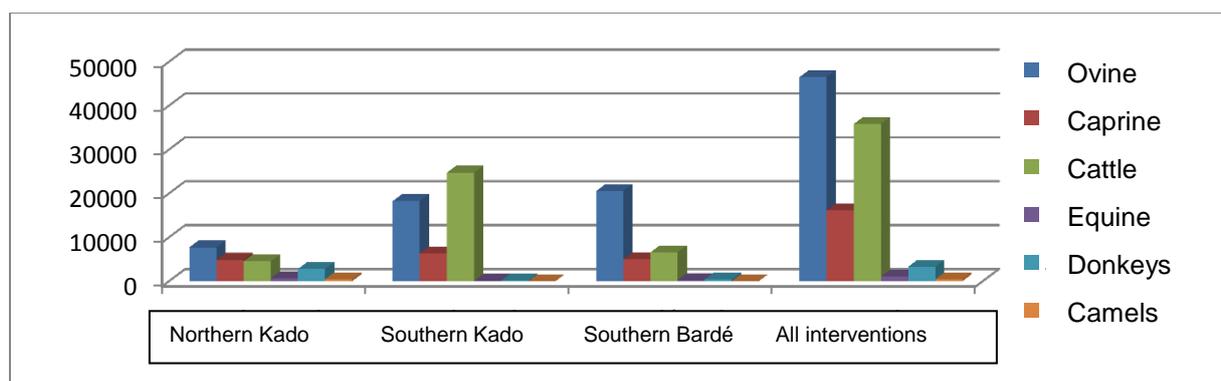
Sub Sector 3: Veterinary Medicines and Vaccines

Cattle vaccination campaign

During two weeks, in June 2014, PU-AMI staff conducted sensitization campaigns in Barde and Kado counties, in order to raise awareness about the upcoming vaccination campaign amongst livestock farmers. The vaccination Campaign took place from the June 10th to 30th and was prolonged from August 20 to 26, 2014. A total of 33,355 heads were vaccinated and 2,583 heads treated.

A total of 103,226 veterinary interventions (treatments or vaccinations) were administrated during the vaccination campaign. 80% of the veterinary interventions were done on sheep (46,513 interventions) and cattle (35,840 interventions).

Figure 4 : Veterinary interventions for the 2013 campaign



Source: PU-AMI vaccination campaign report (2013)

Each injection (vaccination or treatment) done to an animal is considered an intervention.

For the vaccination campaign survey, 424 breeders of 43 villages of the area were interviewed.

- 66% of them have vaccinated their animals during the vaccination campaign.
- 33% declared they did not vaccinate their animals :
 - o 13% declared their animals were out of the area of vaccination (in other areas of pasture),
 - o 9% were not aware of the date of the vaccination,
 - o 4% mentioned the fact that the distance between the site of vaccination and the villages prevented them to attend the vaccination,
 - o 3% were not available on the day of vaccination
 - o 3% complained about the cost of vaccination
- Finally, 1% did not believe in the benefits of vaccination.
- 52% declared they did not notice any change.

Concerning the treatments:

- 53% of the breeders interviewed treated their animals.
- 47% declared they did not treat their animals:
 - o 18% declared their animals were absent from the area of treatment,
 - o 11% were not aware of the campaign,
 - o 9% were not available on the day of the treatment,
 - o 4% declared the cost of the treatment prevented them to attend,
 - o 3% declared they did not trust the vaccinators,
 - o 2% declared that their animals were already in good health conditions.

Yet, most livestock farmers were positive about the use of the treatment on their cattle: 90% of those who used treatment noticed a remarkable improvement of their cattle condition. 8% did not notice any change, 2% declared the condition of their cattle worsened.

According to the interviewed breeders, if another subsidized vaccination campaign was to take place, 89% of them would vaccinate their cattle if they happened to be in the area concerned by the campaign.

45% of interviewed breeders said they will consult veterinary auxiliaries if their animals are in bad condition. This percentage shows us how important it is to train veterinary auxiliaries.

These activities were carried out in July/August 2013, detailed results and outcomes were described in Quarterly Report 2.

Sector 2: Nutrition

Sub Sector 1: Management of severe acute malnutrition with medical complications

Inpatient Care

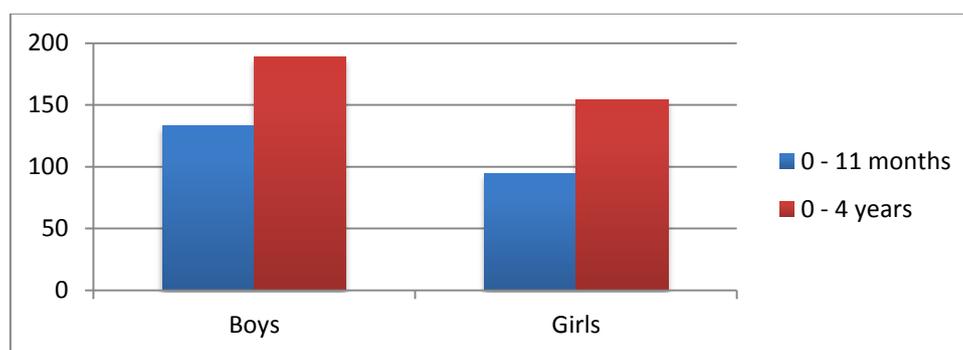
The Therapeutic Feeding Centre (TFC) is located within Adre's district hospital.

A total number of **570** children was admitted from June 2013 to May 2014 (see Annex 5):

- **227** aged 0-11 months and **343** aged 12-59 months.
- **277** marasmus cases (81%)
- **65** kwashiorkor cases (19%)

Other activities conducted from 2013 by PU-AMI in Kado and Bardé cantons (management of MAM cases founded by ECHO) allowed the active screening of a greater number of children than expected, leading to a result of 570 children admitted to Adré (226% of the expected target).

Figure 5 : Breakdown of children admitted in the Adré TFC by age and sex from June 2013 to May 2014



Source : Adré TFC Database (2013-2014)

During hospitalization, acute malnourished children received systematic medical treatment and nutritional treatment according to the Chadian national protocol, while the complications were managed. The systematic medical treatment and the nutritional treatment were provided by UNICEF through the Ouaddaï Sanitary Delegation. A medicines' contingency stock has been set up by PU-AMI to overcome drug shortages within the local system.

As pointed out by the national Malnutrition protocol, once the child's condition is stabilized, the complications solved, and the appetite recovered, the young patient is discharged and transferred to an Outpatient Therapeutic Program (OTP) situated near his/her village (except children under 6 months and those living in area not covered by OTP program).

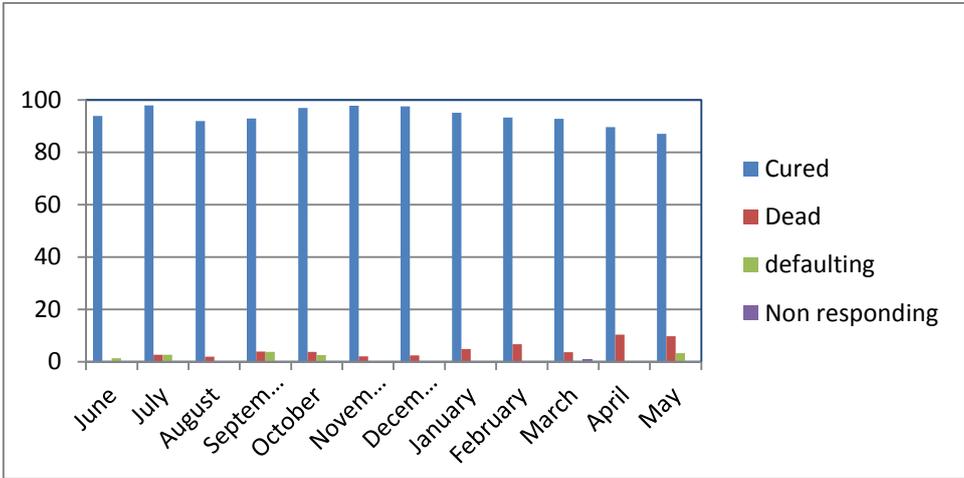
The results for the year of project respect the required SPHERE standard rates (default: <15%, death <10%, cure >75%) and are as followed (see Annex 4):

- Cured: 94.7%
- Dead: 3.8%
- Defaulting: 1.3%
- Non responding: 0.2%

During the two last months of the project, there was an increase of dead cases at the TFC. Several cases were brought lately at the TFC following traditional removal of the uvula (believed to be the cause of malnutrition symptoms), causing infections. Amongst the seven death cases in the TFC during the last two months of the project, five occurred less than 24 hours after the admission.

Besides, the defaulting rate remains remarkably low, mainly due to the referral and counter-referral process proposed and managed by PU-AMI teams, and the supply of food rations to accompanying persons for the hospitalization duration.

Figure 6 : Evolution of performance's indicators of the TFC



Source: PU-AMI data, TFC Adré (2013-2014)

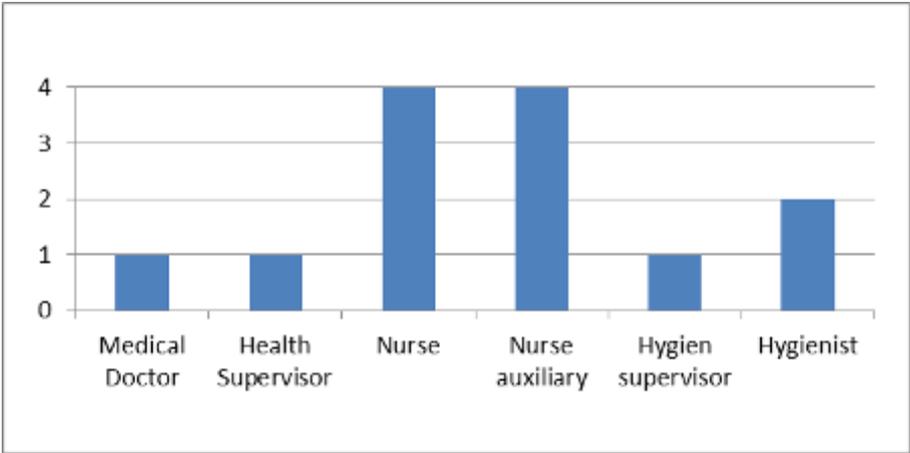
Support to Adré sanitary district in managing the Therapeutic Feeding Center

One of the main weaknesses of Adré health system is the lack of qualified human resources. The District of Adré being a remote area bordering Sudan; the health staffs appointed by the Health Minister usually refuse their appointment within the District. Providing qualified human resources to the Adré TFC was therefore a necessity to improve the quality of healthcare provided to severe acute malnourished children.

PU-AMI recruited during the first quarter of the project one medical doctor, one supervisor, two qualified nurses and five nutrition assistants to work at the TFC. In addition, a qualified nurse has been appointed by the health district and is working full time at the TFC. This set-up of the Adré TFC team was upgraded in March 2014 in order to improve the quality of healthcare provided. Internal tests of knowledge were conducted to promote the two most qualified nutritional assistants (with nursing diploma) as qualified nurses along with the recruitment of a new nutritional assistant. This allowed easier shifts for the healthcare providers.

Once recruited, medical staff members have participated in a complete training enabling them to have the basic knowledge and attitudes required for a proper management of acute malnutrition. After a first refreshment training conducted in November 2013, a second one took place in March 2014. The total number of health staff actually working at the TFC is three women and ten men.

Figure 7 : TFC's Health staff breakdown



Source: PU-AMI

The main objective for future concerning TFC Health staff is to increase Health District and Canton involvement.

Support the referral system to and from the TFC within the district

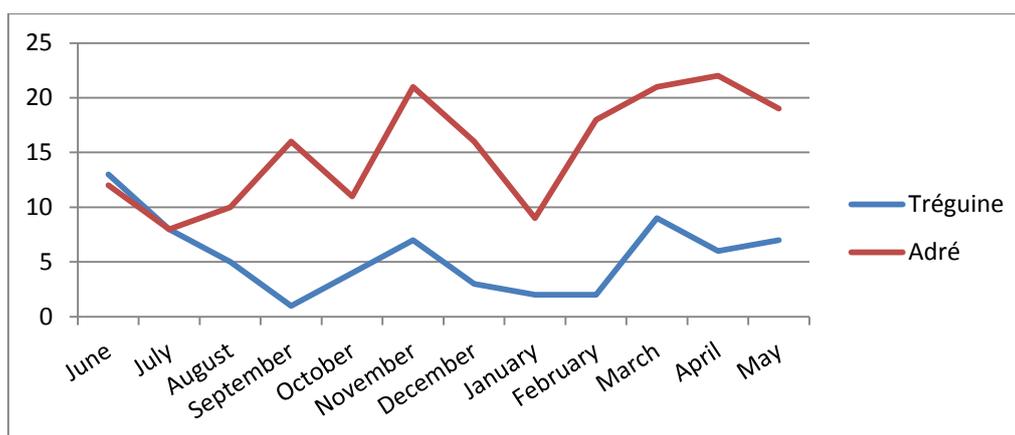
In Eastern Chad, the distance between villages and health centers or hospitals is one of the main barriers impeding the ability of local communities to access health care. The provision of ambulances dedicated to the referral of malnourished patients free of charge, (from the village to the nearest TFC and back from the TFC to the village once the child has reached the discharge criteria) is the only way to enable poor people from remote areas to have timely access to proper health care. Two vehicles are dedicated to refer patients to the health structures. The main difficulty encountered by PU-AMI team was to persuade parents of the absolute need of referring their child. Women usually refuse to refer their child as long as their husband has not agreed to as well. Nevertheless, the sensitization and awareness sessions led by PU-AMI's teams have allowed an increase of the number of children referred during the project.

From June 2013 to May 2014, **250** children were referred by PU-AMI vehicles to one of the two TFC in the intervention area:

- **67** children were referred to Tréguine TFC,
- **183** to Adré TFC.

The following graph shows that the number of referral in Tréguine decreased during the project, while the number of referral in Adré increased. The Adré TFC is the only one able to manage malnourished children with anemia. Adré's hospital offers better health services than Tréguine health center. The two vehicles provided by PU-AMI allowed a better access to Adré for patients with complications.

Figure 8 : Evolution of number of children freely referred to TFC



Source : PU-AMI

Rehabilitation of Adré's TFC

Rehabilitation of the building and facilities

The pediatric building was rehabilitated between December 2013 and January 2014, offering to pediatric children a clean and safe area where they can receive proper care. The rehabilitation works consisted of:

- =) Setting up a new roof and roof framing;
- =) Rehabilitation of the pediatric consultation room in the TFC (equipment and painting);
- =) Rehabilitation of the cement mortar floor in the hospitalization room (30 beds capacity);
- =) Upgrading the walls height so that all rooms can benefit from with the ventilation system;
- =) Setting up an electrical system and fans.

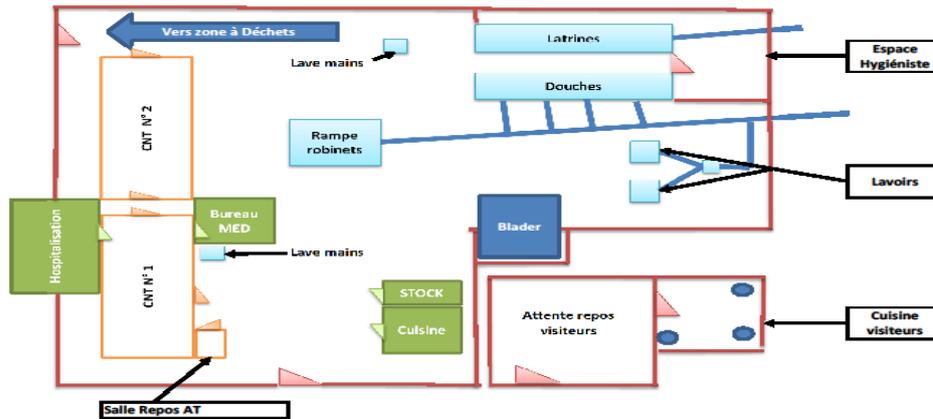
A waste area was set up between February and March 2014, allowing proper management of medical waste. It has been located in a specific area chosen with the Adré Hospital team. Rehabilitation works ended in March 2014.



Therapeutic Feeding Center building - April 2014



Waste Zone area - April 2014



Therapeutic Feeding Center plan

4. Communication and Visibility

Communication

Since the beginning of the project implementation, the Health District team was informed of the objectives, of the expected results, and of the identity of the project donors. Within the Health District team, PU-AMI worked mostly with the *Médecin Chef de District* (Head of the Health District) and the *Chef de Zone* (Head Nurse of the hospital). PU-AMI met them regularly in order to discuss the implementation of the project.

PU-AMI participated to the Cluster Nutrition in N'Djamena and Abéché in order to present the results achieved at the Adré TFC.

Visibility

All staff of the Adré TFC received tee-shirts or nurse blouses with OFDA logos; and OFDA stickers were affixed on all vehicles used for patient referring during the project.

A panel describing all relevant information concerning the project was installed in front of the TFC building within the District hospital.

5. Conclusion and Recommendations

Conclusions:

- With 2.9 months more of self-sufficiency guaranteed thanks to PU-AMI's intervention, the agricultural intervention was successful, and the vaccination campaign contributed to maintain the in kind capital of the most vulnerable households. However, the intervention area remains structurally vulnerable, due to harsh climatic conditions, and a performant monitoring and early warning system is required to be able to respond emergency needs quickly.
- Despite an improvement of the nutritional situation (decrease of the GAM malnutrition rate in the Ouaddai area), the number of children admitted to the nutritional feeding and therapeutic centers has continuously increased between 2013 and 2014, which reveals a good acceptance of the nutritional intervention by the local populations. Thus, the case load of malnutrition still is important, and it is worth maintaining and increasing close support to local health centers
- Partnership with the local health authorities has to be improved, so that there is a greater involvement of local staffs in nutrition intervention, which is still considered to be the INGO's responsibility.

Recommendations:

- In order to address the SAM prevalence, PU-AMI has proposed OFDA to implement a MAM program;
- The organization of a technical debate about malnutrition in the Adré TFC, including national and local stakeholders, would be an opportunity to make sure that local health partners are also able to implement nutritional interventions;
- Considering the global weakness of the whole national and local health system, implementing primary healthcare is very relevant. It would by this way enable inclusion of the nutritional intervention within the health system;
- If PU-AMI intends to keep on addressing food security and nutritional issues, it shall now be in the framework of a comprehensive and integrated approach, in order to be more able to analyze specifically the situation in the area of intervention.

6. Annexes

Annex 1: Months of self-sufficiency (calculation methodology)

Annex 2: Post harvest Survey (December 2013)

Annex 3: List of groundnut seeds distribution beneficiaries

Annex 4: Table of performance indicators of the Adré TFC

Annex 5: Table of Adré TFC inpatient distributed by age and sex

Annex 6: Freely referred children to TFC

Annex 7: Vehicles information