FOOD SECURITY PROGRAM

REPORT OF THE ACTIVITIES IN 2014

DAUGHTERS OF ST. ANNE INSTITUTE - ERITREA

INDEX

Summary

We have been tackling the problem of children malnutrition in Eritrea in the last five years. This year we chose four villages, namely: Abo, Tokonda, Zaghir and Akrur, where the problem was particularly serious due to the last summer drought which brought famine. In the clinics of these villages the Sisters had already done a screening of children, below five years, at the end of the year and organized a support program for 523 children, who presented a serious or very acute index of malnutrition. At the beginning of this year the number was risen to 558, and 35% of them were less than two years old.

For nine months the children were kept under a growth monitoring control, by distributing them DMK, a dietary supplement, oil and milk in accordance with the program. They distributed 49,750 Kg of DMK, 5,030 Liters of oil and 8,310 Kg of milk, for a total value of 132,940 Euro.

Up to 159 sheep were donated to the families, of those discharged, in difficult economic conditions, so that the children could get their daily milk helping, to avoid relapse.

At the end of the program 82% of the children (460) had recovered an acceptable weight, in relation to their age and height, while the others continue to be treated for some months.

Health Centers

Abo, Akrur, Tokonda and Zaghir are four villages with children hit by malnutrition due to:-

- Drought and consequent famine
- Inflation, which results in the increase of the cost of food
- Unbalanced diet

Starting from last year's month of July the drought hampered the ripening of cereals which were growing; the high inflation in the country brought a ruinous increase in the prices of consumable goods; the lack of knowledge of a balanced nutrition led mothers to use the few available resources in an inadequate way, which put them and their children at the risk of undernourishment.

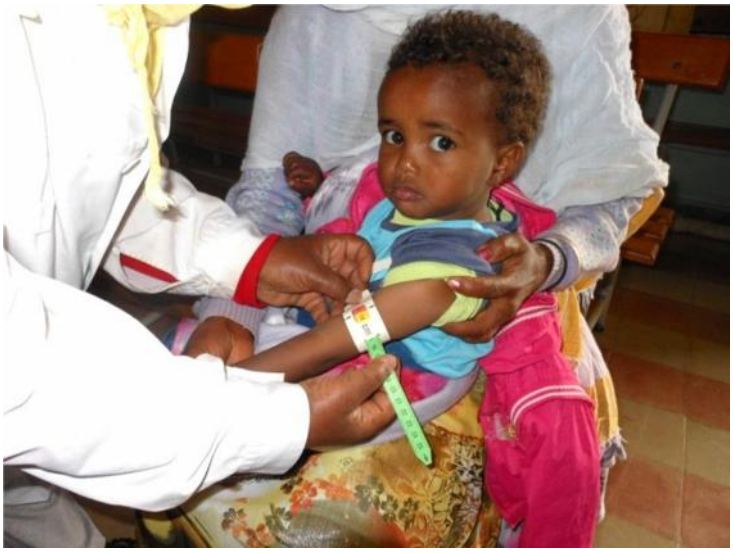
Methods

Toward the end of last year a screening for children under five was done in our health centers.

In Abo we checked 850 children and 361 of them had serious malnutrition symptoms; in Tokonda we checked 580 children with 92 cases; in Zaghir and Akrur we did not a complete screening, but some 30 and 40 cases of malnutrition respectively had already been registered.

So the program foresaw to treat 523 children, seriously affected by malnutrition.

Those with acute malnutrition have a weight/height ratio lower than 70% of the average value of the standard index of WHO[1]; those with severe malnutrition have an index lower than 80.5%; and those with moderate malnutrition an index lower than 86.5%.



The diagnosis is also done on the basis of a visible wasting of the body or presence of edemas. To all children, from six months to five years, we take the MUWAC[2] measurement: less than 112 mm is a sign of acute malnutrition which can lead to a high risk of deaths.

In the case of acute malnutrition, the children are monitored accurately for one month, doing a weekly growth monitoring and checking of the associated diseases.

In the event of serious diseases, the child will be checked in the hospital, and, if necessary, he will be admitted.

When the child overcomes the diseases associated to malnutrition, the check is done every two weeks, to keep under control the growth of weight and height.

[1] World Health Organization
[2] Mid-Upper Arm Circumference

When he reaches a value of moderate malnutrition the control is done monthly, both for growth and general condition.

After doing the monthly growth monitoring, we deliver DMK (dietary supplement), oil and milk to the mothers, in accordance to the estimated quantities for that range of age. When the child is discharged, if his family is very poor, we donate sheep or goats (according to the land), to allow them to give milk daily to the child to avoid relapse into malnutrition, and to start a small breeding farm to improve their economic conditions.

Our experience shows that this way of proceeding is not only useful to the child, but also to his mother. In fact, by following the growing and by knowing the different deviations to the standard values set out with different colors (red= acute; yellow= serious; blue= moderate; green= good), the mothers are emotionally involved in the healing process of their children. Therefore they proudly show the good results with the color that signals an improvement; otherwise they feel ashamed when the color shows a worsening.

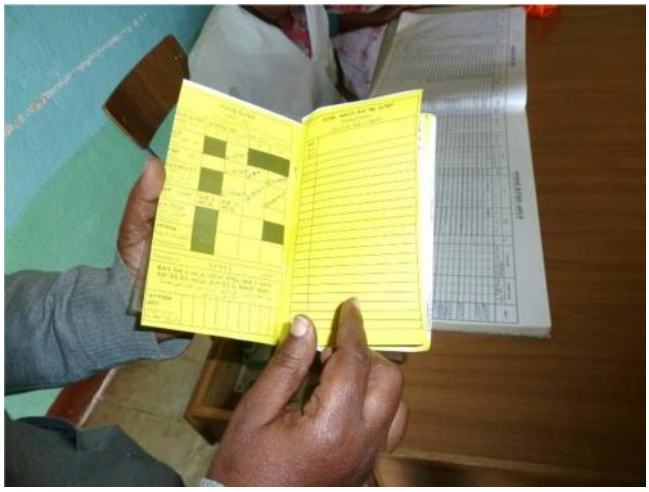
Very often malnutrition is invisible, so monitoring and surveillance of the mothers during breastfeeding and pregnancy, from the nutritional aspect, is fundamental. Training and awareness of mothers is so important, that we have been working with them in the villages for the last five years, by organizing workshops that can deepen their knowledge about the right nutrition and child care. Besides when the mothers come with their children in our clinics, we give them brief lessons about:

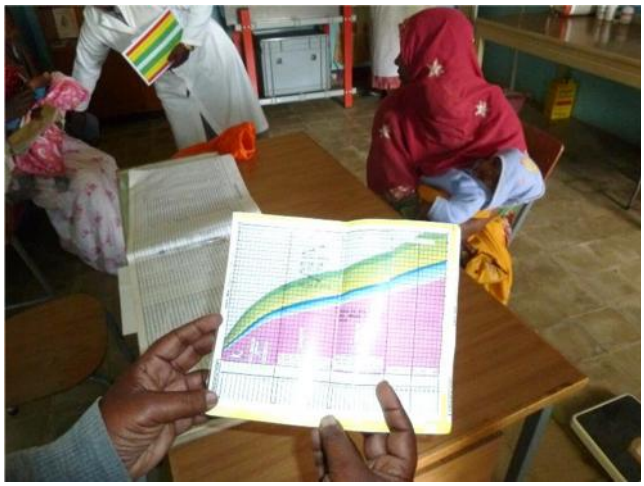
- When to start feeding the babies
- How to prepare ORS for dehydrated children
- How to cook food, with nutritive values, using only vegetables
- Advantages of breast feeding in the first six months
- Water sanitation
- Recognition of the first symptoms of the disease
- Need of doing vaccination and growth monitoring

We insist more about quality of food rather than quantity, to guarantee a balanced diet, especially in this times when there is scarcity of food in Eritrea.

We underline the importance of screening the child weight monthly, so that signs and symptoms of malnutrition can be identified and treated ahead of time.

Right after childbirth we give the mothers a card with the list of all vaccinations which are compulsory for the child, and a colorful chart to monitor the growth rate, to understand quickly the physical condition of the child and the possible intervention for those who are in nutritional deficit.





Development of the Program

At the registration in the program, we gave a card with the personal data of the child and the quantities of supplementary food they will receive monthly to the mothers of the selected malnourished children .

The Sister in charge of the health center registers on a ledger the anthropometric data of the child, and updates them monthly. This is when she informs the mother about the improvement or worsening of her child.

Let us now see in detail the activities performed in each village.

Abo

It is a semiarid and hot place in Dancalia, 35 km from Assab, the southernmost city of Eritrea. All the inhabitants are Muslims and they belong to the Afar ethnic group.

In Abo the Sisters manage a health center, a women promotion center and a kindergarten.

The clinic is considered as a referral center for all the surrounding villages, giving service to around 5500 people.

Some villages are far away up to 60 km and so we organize outreach programs by car once a month for vaccinations and children growth monitoring.

Abo is a semiarid place where occasional and often violent rains bring more damage than benefit.

Malnutrition in children is very high, both out of poverty of the population and the ignorance of mothers about the principles of nutrition. The Sisters fight against this ignorance through training courses.

364 children have been selected for the program, 194 of them with acute and 170 with serious malnutrition. In addition to those chosen during the screening, three children joined the program in January.

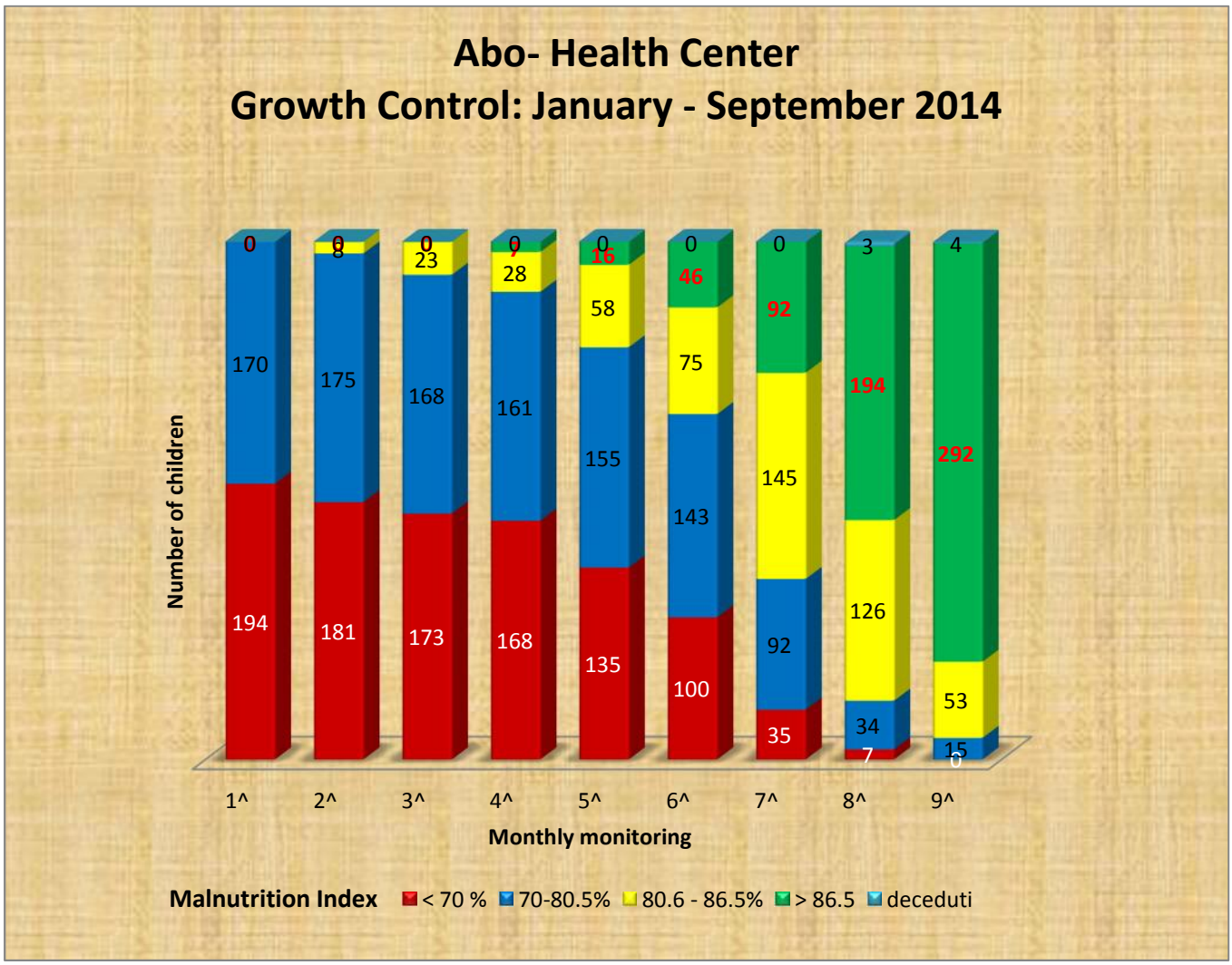
Out of these children, 126 were under 24 months and 238 under five years old.

The treatment has been carried out for nine months and we got good results only as from the fifth month of treatment, as shown in the next table.

In the 8th month, unfortunately, three children out of those acutely malnourished died and a fourth one in the 9th month.

At the end of the period 291 children have been discharged, 15 children still show a serious sign of malnutrition and 53 a moderate form. All of them are continuing their care and we plan to discharge them before the end of the current year.

In Abo drought and famine are continuing this year, so we feel compelled to add new children in the program, as the cured ones go along. In December we will carry out another screening to know how many will be cared of in the months ahead in a program that cannot be stopped.



Akrur

Akrur is a village located in the highlands, 72 km from Asmara. The inhabitants are 2500, but our health center serves more than 4000, coming from the near-by villages.

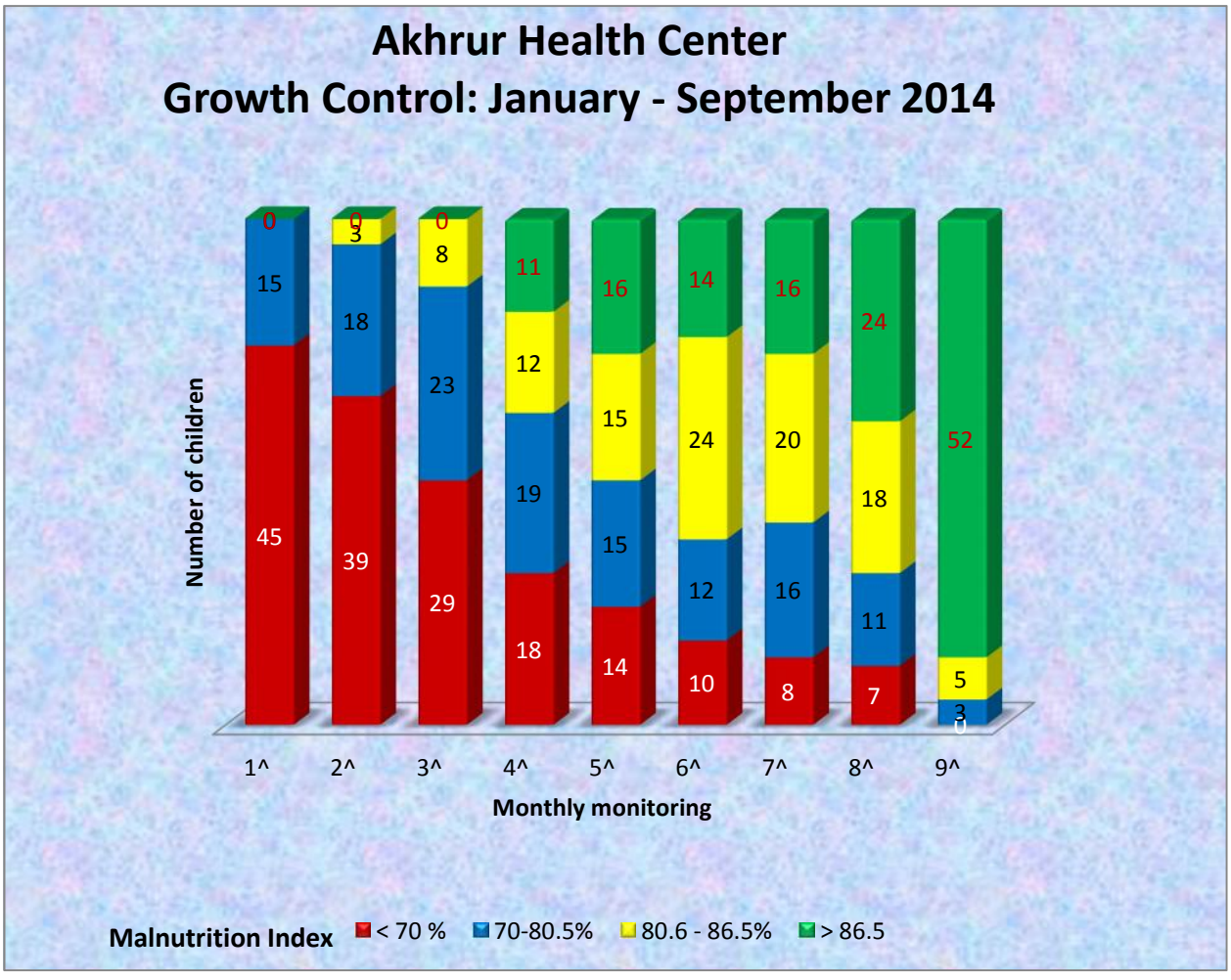
The population, all Catholic, belong to the Tigrigna ethnic group and is devoted to sheep and cattle rearing, subsistence farming (tomatoes, cereals). In the village the Sisters manage the clinic and also a kindergarten and women promotion activities.

Last year the rainfall was scarce and erratic, and harvesting was blighted.

We had planned to take care of 40 malnourished children, but from the continuous screening we selected 60 to be included in the program: 22 under 24 months of age and 38 below 5 years.

Good recoveries started already on the second month, and, at the end of the program, 52 children passed the 86.5% mark. Three children with severe and five with moderate malnutrition will be discharged before the end of the year.

This year's weather has been clement; the rainfall abundant and harvesting in these days is good. Therefore we will stop this program in this village for the next year.



Tokonda

Tokonda is a village located in the highlands, 118 km far from Asmara. It is inhabited by the Tigrigna (Christian) and the Saho (Muslim) ethnic groups. The population is devoted to sheep and cattle rearing, subsistence farming (maize and barley).

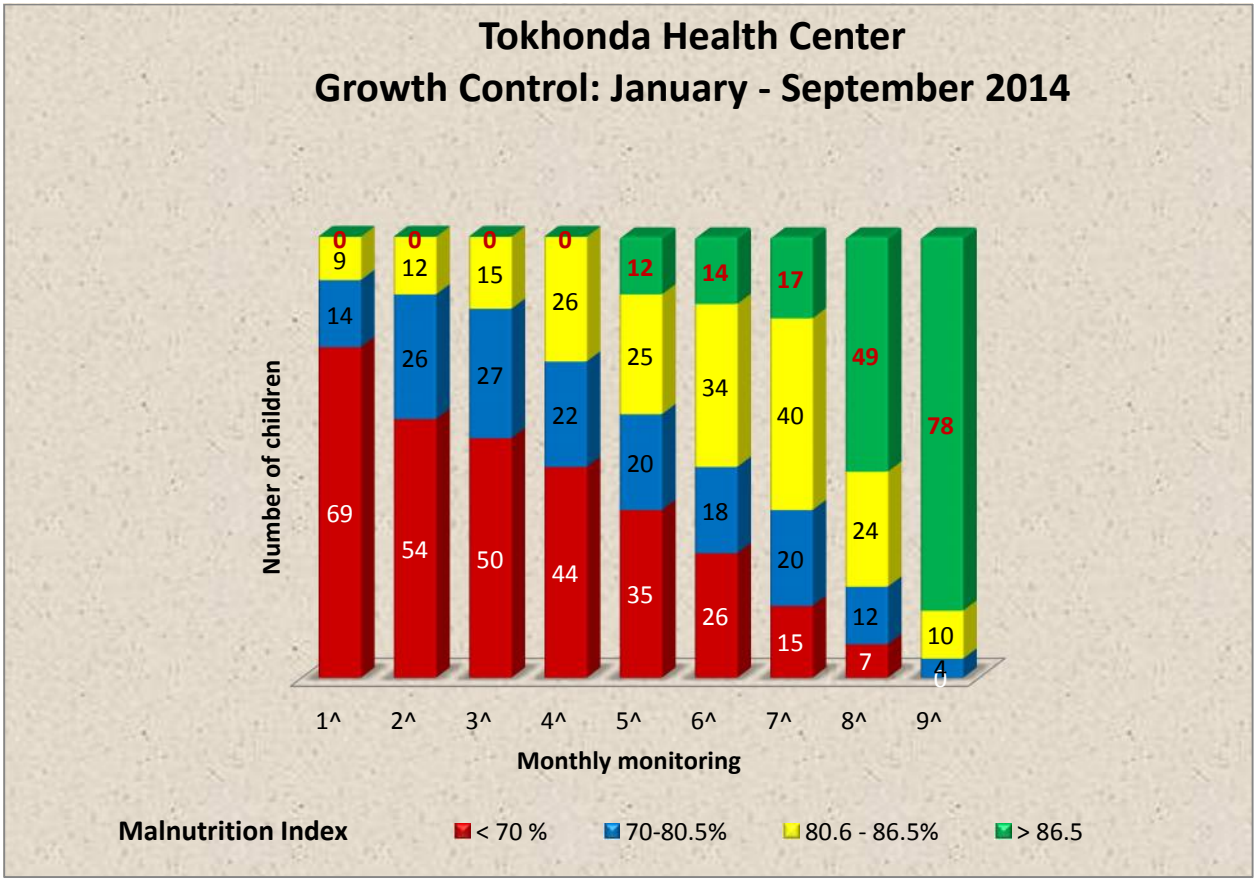
The inhabitants are around 2300, but the health center is attended by as many people from the surrounding villages. The Sisters manage the clinic, a kindergarten and a center for the women promotion.

Tokonda has been suffering consecutively for six years the lack of rainfall. Therefore harvesting has been scarce and famine hit particularly the Saho children, under the age of five, because their mothers, who have little freedom to attend the training courses offered by the Sisters, have a limited knowledge about the origin of malnutrition.

All 92 children, identified as malnourished in the screening program of last year, have been included in the program: 32 less than 24 months and 60 less 5 years old.

We experienced a good recovery already on the second month and, at the end of the program, 78 children had already been discharged, while four were still seriously malnourished and ten were moderately. For these children the program is going on, and we expect to discharge them within the month of December.

Unfortunately, rainfall was good up to August, but then stopped and barley grains could not grow to complete maturation. This means that there will be scarcity of food next year, so we expect to continue the program.



Zaghir

It is a village in the highland, in the Central Region of Eritrea, 38 km far from Asmara. The inhabitants are from the Tigrigna ethnic group (Coptic Christians). The population is devoted to breeding farm animals and to subsistence farming (potatoes, maize, and barley).

The health center of Zaghir gives service to the inhabitants of the village, to the nearby villages Defere and Dekseb and to the ethnic group of Tigrè (Muslims) coming from the lowlands, for a total of 5000 people.

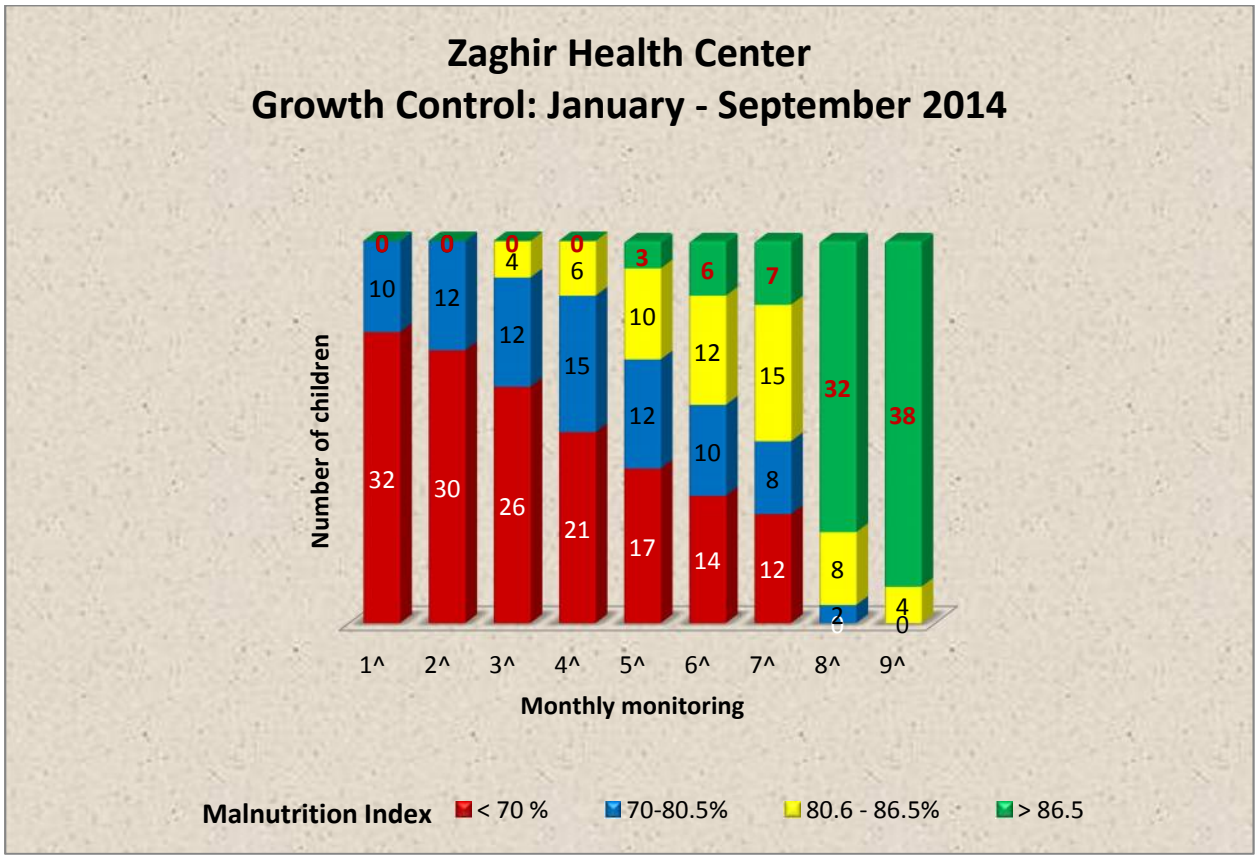
Thanks to the training given by the Sisters in the past years, the mothers of Zaghir have learned to report to the health center when the first symptom of malnutrition present itself.

The children who were monitored last year are now in good conditions, but other arrive to the health center, especially Tigrè.

This year we had foreseen to assist only 30 children, but we had to admit 42, who showed visible signs of improvement starting from the fourth month.

At the end of the period we discharged 38 and only four remained with moderate malnutrition, but they have been discharged one month later.

Even Zaghir got abundant rainfall this year, so we do not plan to carry on this program in 2015.



In the following table we present the summary sheet of the children treated in the 2014 program, grouped by age.

CHILDREN	VILLAGES				
AGE	ABO	AKRUR	TOKONDA	ZAGHER	TOTAL
Less than 24 mth	126	22	32	15	195
2-5 years	238	38	60	27	363
Total	364	60	92	42	558

Results

In January 2014 there were 558 children having treatment for malnutrition: out of them 195 were below two years old. After nine months of monitoring and treatment, 460 children (82%) have been discharged after passing the 86.5% mark of the standard index of malnutrition; 72 (13%), who still showed a slight moderate malnutrition, remained under care for another month; 22 (4%) were under severe malnutrition so they have still treatment expecting to discharge them at the end of the year; 4 (1%) passed away since they could not overcome their initial critical condition.

Those, who showed fast improvement, have been discharged before the end of the program (18 in April, 47 in May, 80 in June, 132 in July, 299 in August), but others arrived, who were in need of an immediate intervention, and took their place.

Another positive achievement is that the mothers become expert in identifying the first symptoms of malnutrition and have created a friendly relationship with the health centers personnel: we can say that their collaboration has been steady and that they understood that priority must be given to the child diet. Besides, when mothers come to collect their monthly ration, we always take the advantage to show them the reached goals, to discuss possible corrections to do, to keep on training them about the principles of a healthy nutrition and domestic hygiene, and to stress the need to take the child to the health center without waiting till the last moment.

The mothers show a great interest in understanding and quickly become active animators in their community.

Children before and after treatment

Acceptance

Three months later

Two years ago Idris, the small kid, was malnourished. At the end of the treatment we donated two goats to his mother.

Today he recovered, the goats increased in number and the first lamb was donated to another family in need, in a noble solidarity chain.

Consumptions

Theoretically the program is designed for nine months, practically it is never disrupted because the discharged children are soon replaced by others in need, especially in Abo and Tokonda, and also because, at the end of the program, there were still children under treatment. The consumption, however, is referred to only nine months of treatment.

We changed the allocation of sheep and goats, by increasing the quota to children less than 24 months old and by reducing that for children between two and five years. Besides we privileged the location where malnutrition was worst and continuous, like Abo and Tokonda, while we reduced the distribution in Zaghir and did not make it in Akrur.

In the following tables we show the unit and total consumption for each health center:

AGE	Unit monthly consumption					
	DMK *Kg*		Oil *Lit*		Milk *Kg*	
	Bdg	Real	Bdg	Real	Bdg	Real
Less than 24 months	3	6	1	1	2	1
2 - 5 years	6	12	1	1	3	2

VILLAGE	Consumption (nine months)			
	DMK *Kg*	Oil *Lit*	Milk *Kg*	Sheep *Num*
ABO	32.510	3.280	5.420	117
AKRUR	5.300	540	890	0
TOKONDA	8.210	830	1370	33
ZAGHER	3.730	380	630	9
TOTAL	49.750	5.030	8.310	159

Sheep and goats were distributed to 97 families, and often we donated two animals, instead of one, in order to increase the daily quantity of milk and the speed of growth of the flock.

Purchases

Unfortunately inflation is running wild and now prices are worked out from a parallel exchange rate that is much higher than the official one. All kind of goods are in short supply and prices are sometimes higher than in Europe.

For the shortage of powdered milk, we were forced to change the recipe and to increase the amount of DMK to be distributed monthly: luckily the governmental factory was in operation, although not continuously, and we have been able to purchase quantities higher than the budget.

Only slightly more than 10% was purchased from a private factory, which is more expensive, so the average price was lower than expected, despite the substantial increase of the transportation cost.

In the following tables we show the purchases of foodstuff and sheep:

DMK COST	Kg	Nkf/kg	Nkf	Transport	Nkf total	Nkf/kg
Governmental Factory	52.736	42,74	2.253.690			
Private Factory	6.112	84,84	518.520			
TOTAL	**58.848**	**47,11**	**2.772.210**	**65.260**	**2.837.470**	**48.21**

OIL COST	Lit	Nkf/lit	Nkf	Transport	Nkf total	Nkf/lit
TOTAL	**5.260**	**120,26**	**632.590**	**9.330**	**641.920**	**122,04**

MILK COST	Kg	Nkf/kg	Nkf	Transport	Nkf total	Nkf/kg
TOTAL	**9.700**	**254,64**	**2.470.000**	**18.650**	**2.488.650**	**256,56**

SHEEP COST	Num	Nkf/un	Nkf	Transport	Nkf total	Nkf/un
TOTAL	**159**	**4.500**	**715.500**	**0**	**715.500**	**4.500**

Final Balance

Hereafter we show the costs incurred in the program, with reference to nine months consumption:

ABO	Real Costs (nine months)				
	DMK *Kg*	Oil *Lit*	Milk *Kg*	Sheep *Num*	Total
Quantity	32.510	3.280	5.420	117	
Unit Cost €	1,09	2,77	5,83	102,27	
Total Cost €	35.465	9.097	31.604	11.966	88.132
Cost per Child €					242

AKRUR	Real Costs (nine months)				
	DMK *Kg*	Oil *Lit*	Milk *Kg*	Sheep *Num*	Total
Quantity	5.300	540	890	0	
Unit Cost €	1,09	2,77	5,83	102,27	
Total Cost €	5.782	1.498	5.190	0	12.469
Cost per Child €					208

TOKONDA	Real Costs (nine months)				
	DMK *Kg*	Oil *Lit*	Milk *Kg*	Sheep *Num*	Total
Quantity	8.210	830	1.370	33	
Unit Cost €	1,09	2,77	5,83	102,27	
Total Cost €	8.956	2.302	7.988	3.375	22.622
Cost per Child €					246

ZAGHER	Real Costs (nine months)				
	DMK *Kg*	Oil *Lit*	Milk *Kg*	Sheep *Num*	Total
Quantity	3.730	380	630	9	
Unit Cost €	1,09	2,77	5,83	102,27	
Total Cost €	4.069	1.054	3.673	920	9.717
Cost per Child €					231

TOTAL	Real Costs (nine months)					Estimated
	DMK *Kg*	Oil *Lit*	Milk *Kg*	Sheep *Num*	Total *Real*	Total *Budget*
Quantity	49.750	5.030	8.310	159		
Unit Cost €	1,09	2,77	5,83	102,27		
Total Cost €	54.273	13.951	48.455	16.261	132.940	140.505
Cost per Child €					238	269

With the different recipe we managed to reduce our costs and to spend 5% less of the budget, while the unit cost per child has been 11% lower than the budget. However, by taking into consideration that, at the end of the period, there were still 94 children under treatment (from one up to three months), we can say that we will spend almost as much as estimated in the budget.

Expectations

More than 550 children have been saved from acute and serious malnutrition in this program.

Luckily this year rainfall was abundant almost everywhere in the country, so we hope to get a good harvest and we expect less cases of malnutrition.

Unfortunately Abo got little rain and Tokonda scarce and erratic rains. Therefore we will do the usual screening in these two areas in December to know how many children are in need of assistance and we will prepare the program for 2015.


Voila!