

FINAL REPORT CEDNA
HEALTH PROJECT: MALNUTRITION AND ANEMIA
PERIOD: APRIL 2018 – APRIL 2020

Title Health project	: Reduction of malnutrition and anemia of children under 5 years old, Cusco - Peru
Duration project	: 2 years
Period execution	: 01 April 2018 – 01 April 2020
Beneficiaries	: 350 parents of the family and 350 children younger than 05 years at the start of the project Community directors and 20 health promoters
Ejecucion project	: Coordinator project, assistant project
Total Budget	: € 140,171.00 (2 years)

1. PROJECT BACKGROUND

This is the fourteenth year that the Vilcabamba Foundation supports its local sister organization CEDNA to execute a health project. This project concerns the reduction of malnutrition and anemia among children in Peru.

The goal of the project is to improve the nutritional status and anemia of a new group of children (under 5 years) in poor and rural areas of the communities of the district of San Jerónimo (Cusco province). It concerns 350 very poor families where malnutrition, poor hygiene, anemia and parasites of the children are serious problems for the health of the family and especially the children. By means of integrated activities with public officials and health personnel, CEDNA will promote and strengthen knowledge, practices, skills, attitudes and behavior for better individual and family health through mechanisms such as awareness-raising, education and orientation.

Compared to previous health projects, this is a project not only for specific groups such as mother and child, but we work with the whole family.

PROBLEM

High indices of malnutrition, anemia and parasites in boys and girls under five

FIGURES CHRONIC MALNUTRITION AND ANEMIA IN PERU 2016 AND 2018							
		2016	2018	2016	2018	2016	2018
Children under 3 years	National Quantity	National %	National %	Cusco Region %	Cusco Region %	District San Jerónimo %	District San Jerónimo %
Chronic malnutrition	396,000	13	12.2	20	12.1	12	13.5
* Rural			25.7				
* Urban			7.3				
* Peri-urban						19	
Anemia	681,000	44	43.5	54	47.2	71	69.8
* Rural	202,000	53	50.9				
* Urban	479,000	40	40.9				

Source Peru: Health surveys ENDES 2016 and 2018, National Bureau of Statistics (INEI), Min. of Health information system SIEN

According to the report on indicators of the health survey ENDES 2018, prepared by the Nat. Bureau of Statistics and Program SIEN of the Ministry of Health, it is clear that health indicators for both chronic malnutrition and anemia in 2018 have improved compared to 2016, but still show high figures.

Another problem is the **absence of a healthy living environment** for the family of the community that causes diseases such as diarrhea (caused by parasite), mainly due to insufficient food handling, fecal contamination of drinking water and lack of adequate basic facilities and practices. In addition, families have limited access to opportunities that enable them to acquire or expand their professional knowledge and are unable to generate sufficient income for their basic needs.

These problems are **partly caused by the educational level of the mother and the degree of poverty**. According to ENDES¹ 2010, chronic malnutrition significantly affects children of unskilled mothers. A 59% of the children of unskilled mothers have chronic malnutrition, while for the higher educated 8.5% of the children have chronic malnutrition.

Lack of access to food due to shortage of financial resources is one of the main reasons children under 5 suffer from anemia and malnutrition. In some cases, infants are fed only once a day. Their diet is low in protein and not eaten five times, as recommended by specialists.

The mothers of the project live in poverty, unable to meet their basic needs not only in terms of physical survival (food, health, housing), but also in terms of development: social inclusion, employment, development of know-how, policy, identity, sense of belonging, access to employment, etc. On average, beneficiaries suffer more from illness and health problems. Health is a key to economic and social development of the population. Being sick is both a cause and a consequence of poverty.

INTERVENTION STRATEGIES

The intervention strategies below have been implemented in the project through designed activities that have achieved positive objectives and indicators.

- Community participation according to co-management model.
- Training of health promoters.
- Home visits.
- Training for families with demonstration sessions.
- Community health monitoring system.
- Inter-institutional cooperation.
- Contests.
- Water filters.

2. THE ACTIVITIES OF THE PROJECT

COMPONENT 1:

TRAINED FAMILIES IMPROVE NUTRITION, FOOD AND HEALTH CARE OF THEIR CHILDREN UNDER 5

1. Basic and final data families

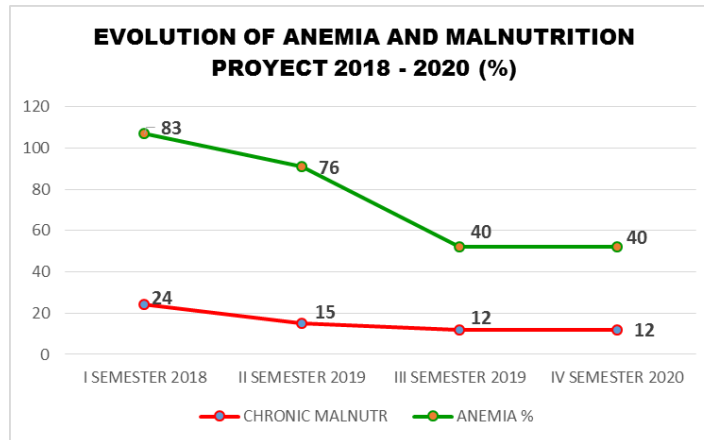
There are 350 children younger than 5 years with current data registered on weight and height checks, blood tests, parasite control, and health and nutrition checks. The final data of the participating children was collected and compared with the basic data in order to measure the results of the impact of the project on the activities carried out. The collection of the data was done in collaboration with the health promoters and staff of the San Jerónimo Health Center.

The main results:

- Current data from 350 children of the project.
- Reduction of chronic malnutrition by 12 % (from 24% project start to 12% project end).
- Reduction of anemia by 43% (from 83% project start to 40% project end).
- A total of 181 children consume balanced meals.
- All participating children have health insurance.
- 100 families with water filters.

¹ Endes (Encuesta Demográfica y de Salud Familiar), is a Demography and Family Health Survey of the National Institute of Statistics (INEI)

GRAPH N° 01



The graph above shows that chronic malnutrition is reduced by **12%** (from 24% to 12%) and anemia is reduced by **43%** (from 83 to 40%).

2. Awareness raising workshops aimed at government officials, health personnel, community board members

This achieves that:

- Families have been made aware of the consequences of anemia, and have taken actions to bring their children to health center controls and to treat anemia.
- Board members of the participating communities execute a work plan to improve the health situation of the children of their community.
- Health personnel collaborate with government, municipal and private organizations to reach all families in the intervention area.

3. Establishment health committee with community boards (chairman, secretary, treasurer)

This achieves that:

- The health committees themselves determine the health situation of the children of their community by using the information from the growth charts of the health center and the information from the health promoters active in their community.
- The health committees execute a work plan with activities to improve the health of the children.
- The health committees achieved active participation of the families from the community and fulfilled their obligations regarding activities to improve the health situation of their children.
- The health committees conduct checks on chronic malnutrition and anemia in collaboration with their community health promoters.

4 Recruiting and selecting health promoters from each community according to selection criteria

There are 21 health promoters who have been trained in health and nutrition by CEDNA. They provide health and nutrition training to the families of their community with children under 5 years old. They also make home visits. The leaders are chosen by their boards and by organizations in the intervention area such as: Milk program, Health center, Educational organizations.

5. Health promoters training program on stimulation of healthy eating and nutrition practices, stimulation of healthy homes

The health promoters have completed the complete training of the project in collaboration with the health center. The Health training program concerns the training program of the Ministry of Health for the training of health promoters with a duration of 2 to 6 months. Training material was distributed during each training session.

Topics covered: strategies to combat anemia, home visits, CRED health checks (treatment growth chart), role and function of the health promoter, balanced nutrition, infant nutrition (5 lines of complementary nutrition), drinking safe water and a healthy home.

21 health promoters have been trained and qualified in health and nutrition, of which 13 promoters are already working in MONET² (centers of nutritional orientation and early stimulation of the Municipality of San Jeronimo) and making home visits to families with children between the ages of 4 and 11 months who have been diagnosed with anemia and provide medicines to combat them (program of municipalities to promote adequate nutrition, prevention and reduction of anemia). The promoters receive a monthly fee of S/. 550.00 (€ 153 / \$ 167) per month from the Municipality of San Jeronimo for working at the Monet and S/. 10.00 (€ 2,7 / \$ 3) per visit for each child.

6. Registration of families by health promoters (each promoter works with at least 15 families from their community)

The health promoters each have an average of 15 families with children under the age of 5 under their responsibility. They invite them to demonstration sessions, make house visits and do checks on the consumption of iron-containing foods (in the case of children with anemia), balanced nutrition, use of a water filter, checks on family visits with their child at the health center.

7. Training workshops with demonstration sessions on healthy food and nutrition practices

Training workshops have been held per community with the active participation of health promoters. Their activities to be performed are part of winning bonuses for the mutual competitions between health promoters.

8. Home visits for advice by health promoters

Activity that takes place every month. Each promoter has educational material available such as: Flipchart "How to prevent anemia" and Flipchart "Supplementary food" and various leaflets. The promoters are also equipped with clothing and a backpack to recognize them as the health promoter of their community. During the project 1,170 visits were made by trained health promoters. With this, a large part of the population is visited with the active participation of their "own" promoters from the relevant community.

9. Medicines for children with anemia and parasites

A total of 100 children older than 3 years have received medicines for anemia and parasites. A total of 73 children received iron sulfate medicine for anemia treatment and 27 children received anti-parasite medicine.

Of the 100 children where water filters are placed, 90 are children without parasites. This has contributed to a significant reduction in anemia through hygiene habits, healthy eating and the consumption of safe drinking water. As a result, 80 children out of 100 are not anemic. Water filters are an important means of preventing and reducing malnutrition.

10. Implementation of vegetable gardens to promote the consumption of vegetables

94 vegetable gardens have been implemented for families that have space available for their implementation. Training was provided by the health promoters to the families, who have been trained by the organization APRODES (Peru) and carry out the implementation and follow-up in collaboration and coordination with the CEDNA team. APRODES has also made vegetable seeds available. This concerned: spinach, cabbage, radish, lettuce, beet, coriander). There are 60 families that consume the vegetables.

² MONET (Módulo de Orientación Nutricional y Estimulación Temprana), centers of nutritional orientation and early stimulation of the municipalities

11. Monitoring and evaluation of the participating families by technical team CEDNA (mainly children under 18 months with anemia)

The technical team of CEDNA made monthly monitoring and evaluation visits. This concerns, among other things, guiding health promoters during home visits for training and advice. But also individual home visits to families with children with anemia and / or families who do not see the need for medical treatment and controls for their children. These families have been identified by health promoters who notify the technical team of CEDNA. During the home visits, the necessary information / orientation is provided.

12. Health Network Consultative Meeting of Organizations to Promote Child Development and Food Security in the District of San Jeronimo

CEDNA monthly participated in the consultative meetings of the network of health organizations in the San Jerónimo district. A work plan has been compiled to jointly implement actions to combat anemia and malnutrition.

It has been achieved to organize activities with the Ministry of Education, such as giving demonstration sessions of healthy meals in the schools and childcare centers in the communities, registration of all children aged 0 to 5 years from the PRONOEI government educational institution³ after a diagnosis of anemia, as a result of which action was taken on time and treatment was offered with the Ministry of Health.

With the Ministry of Health through demonstration sessions more families have been reached. Furthermore monitoring of anemic children has improved, including through promotion boards of health committees. Also home visits have been coordinated by sectors and health campaigns have been promoted in markets to promote the consumption of a balanced iron-rich diet.

13. Training participants Health committees of each community

The training workshops have been held for the members of the Health Committees, consisting of community board members who are the link between the community and the project and promote the participation of the population for the healthcare of their children.

The health committees have mapped the children under the age of 5 of their community regarding: how many are anemic, who goes to health center controls, who is being treated for anemia, etc. The committee's controls contributed to reduce children with anemia and malnutrition. Through the established work plan of the committees, they implement actions to improve the health situation of their community.

14. Follow-up and monitoring of control growth and development / weight, length, vaccines and screening anemia

The health committees have implemented a health control system. This is a banner with a list per child of their community participating in the project. It keeps the latest health data from the health center of control visits regarding growth and development, anemia data, and nutritional data of the child. The health promoters use this information during their home visits to the families. During their meetings, the data is analyzed and, where necessary, looked with the promoters where families are who need extra advice / counseling to improve their child's health situation.

15. Development of new training material for health promoters

The health promoters have received training materials that are used during home visits and workshops they provide on health and nutrition. This concerns material about anemia, washing the hands, the healthy home, the use of a water filter, the prevention of anemia and nutrition.

³ Programa no escolarizado de Educación Inicial (PRONOEI), The PRONOEI is education for children aged 0-5 for poor families

16. Competitions in health and nutrition

Competitions have taken place between *health committees and health promoters* in which premiums have been awarded to the winning persons. This has been developed to motivate and recognize the work of the participants in the project. San Jeronimo Health Center staff has actively participated as a jury member in determining winners and awards. The prizes awarded to the health committees concerned monetary amounts. Food baskets with rice, sugar, milk, oil and oatmeal were awarded to the winning health promoters.

Qualification criteria of the health committees: Conduct health diagnosis to monitor children with anemia and chronic malnutrition, prepare and implement a work plan in coordination with health promoters and families in their community and health personnel who have provided all necessary information.

Qualification criteria for health promoters: Participation in training workshops, home visits, and children recovered from anemia, participation in fairs or campaigns, preparation of demonstration sessions, children from their families with updated data (weight and height information, anemia) of the health center.

COMPONENT 2:

IMPROVING HYGIENE, SANITATION, HEALTH AND ACCESS TO SAFE WATER FOR THE FAMILY

1. Implementation training demonstrative sessions in hygiene for promotional mothers

Demonstrative sessions were given to the promotional mothers. The topics discussed were: Parasites, Prevention of infectious diseases (washing hands), Safe water consumption, Healthy living environment, Distribution of housing and Healthy housing, and the preparation of healthy food in collaboration with the health center. Educational material has been distributed to the promotional mothers so that they can transfer what they have learned to the families during their home visits.

2. Exchange of experiences with health committees and health promoters and families

The NGO Desea Peru has been visited. They work on anemia and malnutrition in rural areas of the Lamay district of the Sacred Valley and are specialists in the training and promotion and use of water filters.

3. Follow-up and monitoring of the CEDNA technical team to families on healthy housing

The technical team made house visits to check on families concerning healthy housing activities such as: order, cleaning, and personal hygiene. Priority has been given to families with children who have high levels of malnutrition and anemia.

4. Competitions about hygiene habits in the house

A competition was held among the families concerning the cleaning of the house, personal hygiene, family hygiene, and toilet corner in cooperation with the health center, health promoters and the CEDNA technical team. The winners have received in-house materials to improve hygiene.

5. Implementation of water filters

A total of 100 water filters were awarded to the families participating in the project. A donation of 57 filters from the American Foundation Help Peru in 2018 and a donation of 43 filters from the Dutch Foundation Vilcabamba in 2019. The families that received the water filters were selected according to selection criteria, including presenting a parasitological examination of their child. In the last six months maintenance of the water filters has taken place and filter cartridges have been issued to replace the filters.

6. Advice and guidance for a healthy home with promotional mothers

Home visits have been made to the families of the project by promotional mothers for advice on the organization of the home, personal and family hygiene.

3. OBJECTIVES AND ACHIEVED RESULTS PROJECT

DESCRIPTION OBJECTIVE	OBJECTIVES INDICATORS	RESULTS INDICATORS	REMARKS FINAL REPORT
OBJECTIVE: TO HELP REDUCE CHRONIC MALNUTRITION AND ANEMIA OF CHILDREN UNDER 5 YEARS IN THE CUSCO REGION			
At the end of the project: reduction of chronic malnutrition of children under 5 years old.	6%	12%	Reduction from 24% to 12%
At the end of the project: reduction of anemia of children under 5 years old.	40%	43%	Reduction from 83% to 40%
RESULT 1: TRAINED FAMILIES IMPROVE THE NUTRITION, FOOD AND HEALTH CARE OF THEIR CHILDREN UNDER 5			
Families use a balanced diet ⁴ for their children under 5 years old.	40% (350 = 140)	52% (350 = 181)	181 families use
Children under the age of 5 have improved their nutritional situation ⁵ .	60% (350 = 210)	88% (350 = 308)	308 children improvement
Children under the age of 5 have reduced their anemia ⁶ .	40% (350 = 140)	43% (350 = 151)	151 children reduction
Families have vegetable gardens for food security ⁷ .	60% (90 ⁸ = 54)	104% (90 = 94)	94 families with vegetable gardens
Pregnant women with health insurance ⁹ .	70%	100% (7 = 7)	7 pregnant women have insurance
Promotion leaders trained in health and nutrition.	20	21	105% trained
Families have health insurance SIS or other health insurance ¹⁰	60% (350 = 210)	100% (350 = 350)	350 have health insurance
RESULT 2: IMPROVING HYGIENE, SANITATION, HEALTH AND ACCESS TO SAFE WATER FOR THE FAMILY			
At the end of the project, families apply good hygiene practices and food operations in and around the home according to criteria of the Ministry of Health.	60% (350 = 210) 60% (143 = 86) ¹¹	23% (350=80) 56% (143= 80)	80 families
Children under 5 years old have EDAS ¹² and parasites reduced.	30% (350 = 105)	26% (350=90)	90 children
Families with good practices in personal hygiene in their homes and the environment according to criteria of the Ministry of Health.	60% (350 = 210) 60% (143 = 86) ¹³	23% (350= 80) 56% (143=80)	80 families
Families have good waste management and treatment, according to criteria of the Ministry of Health.	60% (350 = 210) 60% (143 = 86)	23% (350= 80) 56% (143=80)	80 families
Families have reduced the incidence of parasites through the use of water filters.	100 families	90% (100=90)	90 children reduced
Families qualified as healthy families according to the criteria of the Ministry of Health.	60% (350 = 210) 60% (143 = 86) ¹⁴	20% (350 = 70) 50% (143 = 70)	70 families
Families adequately organize their homes for the development of their children under 5 years old.	30% (350= 105)	26% (350= 90)	90 families organized

Ministry of Health criteria for families classified as healthy families

⁴ Families consume at least one food group: meat, grains, fruits, vegetables, and dairy.

⁵ In relation to weight and height in some children, recovery from malnutrition takes time, it is a reflection of good nutrition and care that only becomes visible over time.

⁶ In total, 212 children recovered from anemia (151 children in the project, 61 children who are no longer part of the project). The data is variable because there are children in the project who become anemic again despite recovering.

⁷ Of the 94 families that have implemented, 60 are families that grow vegetables.

⁸ At the start of the project, 90 families have been identified who have room for the implementation of a vegetable garden.

⁹ There are 7 pregnant women in the project.

¹⁰ There are 15 beneficiaries who have left the project. A total of 365 beneficiaries with insurance.

¹¹ Aim 86 families out of 143 families with housing to meet the criteria of the Ministry of Health.

¹² The prevalence of EDAS (acute diarrheal disease) decreased due to various actions such as parasite treatment, safe water use through the implementation of water filters, implementation of hygiene habits in the family and healthy practices.

¹³ Aim 86 families from 143 families with housing to meet the Health Ministry's criteria.

¹⁴ Aim 86 families from 143 families with housing to meet the Health Ministry's criteria.

1. The house must be located outside risk and landslide areas.
2. The kitchen should be separate from the domestic environment and no animals should be kept indoors.
3. The bedrooms must be separate for parents, sons and daughters.
4. The house must be ventilated and illuminated.
5. In a healthy home, safe water is consumed (chlorinated and boiled). In case of CEDNA beneficiaries to have the water filter.
6. Separation of solid waste into organic and non-organic and always covered.
7. Hygienic habits are practiced (personal hygiene, cleaning the home and the environment).
8. Food is treated properly (it has a sink in the kitchen, handling of food: preserved and refrigerated).
9. The sanitary facilities are clean, purified and have a dustbin with a lid.
10. Good interpersonal relationships are maintained.

It is difficult for families with rental properties to meet criteria 3, 8 and 9. Many families have only one room and it is difficult to separate the bedrooms and separate kitchen and dining area. In rental homes, they also share hygienic services such as toilets.

Of the 350 children, 296 are families, of which 77 (26%) have their own home and the rest 219 (74%) are rented or monitored by acquaintances and family members. Of the rental properties, **153 families, 70% have only one room and share hygiene services and cannot meet the criteria of the Ministry of Health.** Every day it is mutually agreed who has a toilet service to clean if hygienic services are shared. In total, 143 families (296-153) have opportunities to realize healthy housing according to the criteria of the Ministry of Health. There are 70 families that meet these criteria.

4. BUDGET AND EXPENDITURE DURING 2 YEARS EJECUCION OF THE HEALTH PROJECT

BUDGET HEALTH PROJECT IN EURO'S (01 APR 2018 - 31 MARCH 2020)	BUDGET 01 APR 2018 - 31 MAR 2020	EXPENDITURE 01 APR 2018 - 31 MAR 2020	EXPENDITURE 01 APR 2019 - 31 MAR 2020 %	BALANCE BUDGET	BALANCE BUDGET %
EXPENDITURE 01 APRIL 2018 – 31 MARCH 2020	€ 140,171.00	€ 128,780.00	92%	€ 11,391.00	8%
TOTAL	€ 140,171.00	€ 128,780.00	92%	€ 11,391.00	8%

5. MAIN RESULTS, CONCLUSIONS AND LESSONS LEARNED

MAIN RESULTS:

- Result project:
 - Reduction of chronic malnutrition by 12%, Reduction of anemia by 43% through the intervention strategies of the project.
- Results of activities:
 - There are 21 health promoters trained and authorized to carry out controls and monitoring of children. The promoters receive training and guidance from the health center to continue the work.
 - There are 5 health management committees active consisting of board members of communities which represent the Community in the implementation of the health program to reduce anemia in their community through the implementation of their plan, which at the health center provides the continuity and support.
 - 1,170 home visits were made by health promoters, mainly to children with anemia.
 - 90% reduction of parasites in families with water filters implemented.

MAIN CONCLUSIONS

- The intervention strategies of the project have ensured that minimum conditions have been created for a self-management process by the communities to combat anemia and malnutrition in the intervention area, supplemented by a follow-up and monitoring process.
- At the national level, the Peruvian government has implemented various social health programs. The remarkable economic growth in Peru over the past 15 years has reduced poverty and improved several socio-economic indicators. But the anemia problem still exists. To this end, new health programs have been introduced by the government to combat this. Our health work has fulfilled its purpose satisfactorily. And it is necessary to leave the intervention area in order not to duplicate efforts with the Peruvian government.

MAIN LEARNED LESSONS

- Growth and development controls should only be performed in health care facilities, so that the child has more opportunities to access comprehensive care.
- Providing training to health promoters in the area where they operate.
- Guidance and advice with health promoters during the home visits.

000

ANNEX: PHOTOS



Photo: Training health committees (board members of communities).



Photos: Implementation control system health situation children



Photos: Competitions health committees, Implementation control system community



Photos: Distribution of health committee premiums



Photos: Training Promotion mothers



Photos: Promotion Mothers give demonstrative sessions in the communities Anden Anden, Sunccu.



Photos: Home visits carried out by the promotional mothers



Photos: Competition between promotional mothers



Photos: Distribution water filters



Photos: Promotional mothers participate in the market during International Nutrition Day



Photos: Home visits by CEDNA technical team



Photos: Participation technical team CEDNA in health network meetings of San Jerónimo District



Photos: Iron sulfate distribution



Photos: Distribution of medicines against parasites



Photos: Distribution of vegetable seeds



Photo: Implementation of vegetable gardens



before



after



before



after

Photos: Home improvements