



# PERU: PROJECT PROGRESS AND RESULTS

## PERU

### COUNTRY SITUATION

#### Economic growth

- In the last decade, Peru's GDP grew on average 7% a year, maintaining its status as a middle-income country.

#### Poverty

- The percentage of Peru's population living below the poverty line continued to decline, going from 36.2% in 2009 to 31.3% in 2011. Poverty among the rural population declined from 60.3% in 2009 to 54.2% in 2011. Poverty was reduced in both urban and rural zones, and in all of the geographic regions, except for the rural Amazon area.

#### Inequality

- Advances have been made in fulfilling children's rights, but challenges remain including large inequalities in social indicators by geography, gender, ethnicity and economic status. President Ollanta Humala was elected in 2011 on a platform of poverty reduction, social inclusion, and increased access to social services including ambitious 2016 targets such as universal coverage of early childhood education and zero chronic malnutrition.



#### Stunting

- In 2011, 19.5% of children under five in Peru were affected by stunting. Over the past five years, stunting has decreased at a faster rate than the previous period. The average yearly reduction in stunting between 2007 and 2011 was 1.8% a year compared to 0.4% a year from 2000 to 2006. Inequities remain, however, as stunting rates in highland (30.7%) and jungle (28.2%) regions, with their high prevalence of indigenous populations, outrank coastal regions (8.1%). In rural areas, stunting is three times higher than in urban areas. Children in the poorest quintile are 15.6 times more likely to be stunted than children in the richest quintile. Children whose mothers have a lower level of education are seven times more likely to be stunted than those with a superior level.

#### Anemia

- In 2011, 41.5% of children under three in Peru were anemic. In absolute terms, there were 734,624 children affected by anemia. Between 2000 and 2007-08, the average reduction in the anemia rate was about 0.5% a year, but between 2009 and 2011 the rate dropped

2.9% annually. Unlike stunting, anemia affects almost all socioeconomic levels and regions. Nineteen of the 24 regions in Peru report anemia rates of higher than 40% among children under three, many of them located principally in the highland and jungle. The gap between urban and rural areas is relatively small, but has grown from 2007-08 to 2011.

### **Program – Background**

- In 2008, Peru's Ministry of Finance implemented the Budgetary, Strategic and Coordinated Nutrition Program with the objective of reducing stunting among children under five. It aims to increase growth and development monitoring, immunization against rotavirus and pneumococci, complementary food for children and pregnant mothers, and iron supplementation during pregnancy and for children under five.
- In 2009, after two years of advocacy, the Ministry of Health and the National Food Assistance Program, with the support of UNICEF and the World Food Programme, formulated a plan for the implementation of micronutrient supplementation in three prioritized regions, representing coverage of 101,000 children under three. The implementation of this strategy began in August 2009. In 2011, the National Food Assistance Program undertook the purchasing of micronutrient supplement and, together with the Ministry of Health, decided to expand the strategy to 16 regions.

### **PLANNED PROGRAM RESULTS**

The main objective of this program is to contribute to the improvement of child survival, growth and development in Peru, through the strengthening of national policies for the prevention and control of micronutrient deficiencies – with a special emphasis on zinc – and through supporting their nationwide implementation.

Specific objectives:

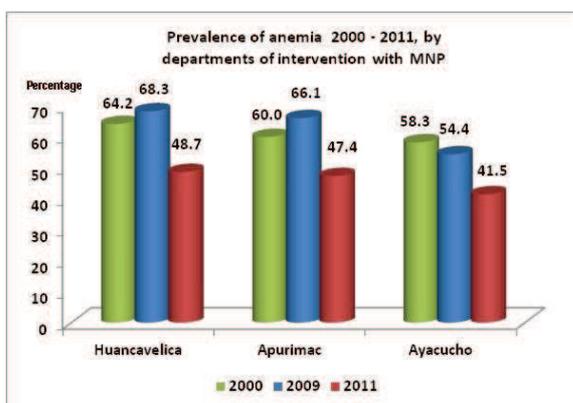
- Improve zinc intake in children under three through micronutrient supplementation and the promotion of adequate complementary feeding.
- Reduce the incidence and severity of diarrhea diseases in children under five in vulnerable areas through therapeutic zinc supplementation.
- Reduce anemia prevalence in children under three through micronutrient supplementation and the promotion of adequate complementary feeding.
- Improve knowledge about effective zinc interventions in public programs focused on child survival, growth and development.

## RESULTS

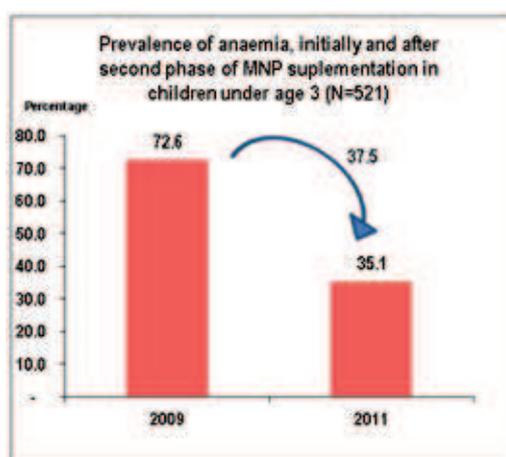
### Anemia rate among children under three in first three pilot regions – Apurímac, Ayacucho and Huancavelica – drops by 17 percent

One of the most important results of the micronutrient supplementation strategy in the first three pilot regions of Apurímac, Ayacucho and Huancavelica is the reduction of anemia prevalence. According to the national 2011 Demographic and Health Survey (DHS 2011), there has been a considerable decrease in anemia in these three regions. Between 2009 and 2011, the average drop in the three regions was 17.1 percentage points. This is significant if compared to the trend in the previous nine years, which showed an increasing prevalence of anemia in Apurímac and Huancavelica, and only a slight reduction in Ayacucho. From a public policy perspective, these results are particularly relevant as they reflect the impact of a strategy carried out in the framework of a Ministry of Health program.

The micronutrient supplementation program's effectiveness appears to increase when measuring the impact achieved in children who completed two phases of supplementation, consisting of two supplementation periods of six months each with a rest period of six months in between. The program's preliminary report of sentinel surveillance data from 29 health centres shows a reduction in anemia of 37.5 percentage points, from 72.6 to 35.1 percent. This preliminary report corresponds to 521 of the 1,100 children who received and completed the two phases of supplementation, involving 90 sachets of multi-micronutrients per phase. These results reinforce the strategy's approach which is based on ensuring two phases of supplementation to significantly reduce micronutrient deficiency.



Source: National Demographic and Health Survey Strategy Program Indicators, February 2012 (<http://desa.inei.gob.pe/endes/images/ppr2011.pdf>)



Source: Project sentinel surveillance reporting

## Over 75 percent of children who started micronutrient supplementation completed it as scheduled

According to the Health Information System, which is the monitoring system of the Ministry of Health, in 2011, 77.1 percent of children who started micronutrient supplementation in the three regions of intervention completed it as scheduled.

In all three individual regions, coverage exceeded 68 percent. Most notably, Huancavelica improved its coverage to 92 percent. Although the coverage is high, it is less than that achieved in 2010 due to product supply challenges caused by delays in procurement under the responsibility of the National Food Assistance Program.

This year, the quality of the information registered in the Health Information System has improved, and the information from 2010 and 2011 has been revised, as reflected in the table shown here.

Percentage of children under 3 years who completed MNP supplementation by year		
Department	Year	
	2010 (%)	2011 (%)
<b>Total</b>	83.3	77.1
Huancavelica	89.9	92.7
Apurímac	76.1	73.9
Ayacucho	86	68.8

**Source:** Multi-micronutrients Strategy Monitoring System (Health Information System, CRED growth monitoring forms)

## Micronutrient deficiency positioned as a priority on the agenda of the three regions

Micronutrient deficiency, specifically anemia, has been included in the public agendas of the regional governments of Apurímac, Ayacucho and Huancavelica. These three regions have formed an alliance, and the declaration signed by their Regional Presidents includes the reduction of anemia as one of their priorities. Additionally, as part of the forum on social inclusion which included the participation of the Minister of Development and Social Inclusion and senior national government officials, Ayacucho established the goal of reducing anemia in the region.

As a result of advocacy, eight districts in Apurímac have incorporated the monitoring of the anemia indicator in children under three in their local coordinated plans. This has motivated the participation of community authorities in visits to families to make sure they were following the plan and emphasizing the importance of micronutrient supplement consumption.

Based on the results in the three regions, other public and private institutions have begun implementing micronutrient supplementation in some other regions of the country. Local governments have begun acquiring micronutrient supplements, such as the Municipality of Lima, and Mariscal Nieto in Moquegua. The NGOs CARE, ADRA and Prisma have also been supporting a range of initiatives in districts of the regions of Ancash, Cusco, Huánuco, La Libertad and Lima.

**Over 1,000 children with acute diarrheal diseases received zinc treatment in Ayacucho and Ventanilla, with nearly 50 percent of diarrhea cases in Ventanilla health establishments treated with zinc**

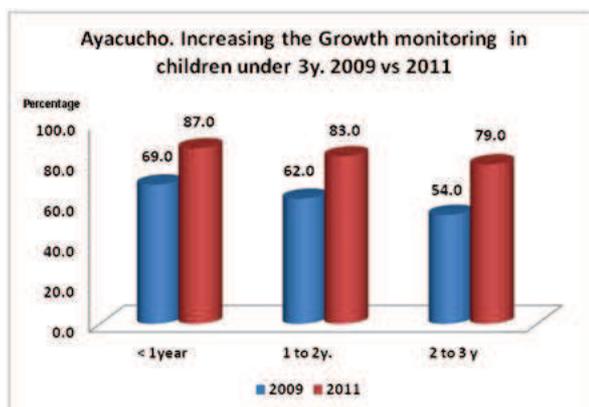
The distribution of zinc to children with diarrhea began in Ventanilla in July 2011 and in Ayacucho’s province of Huamanga in November 2011 and its province of Huanta in February 2012. A total of 1,030 children suffering from diarrhea received zinc tablets in 24 health establishments throughout Ventanilla and Ayacucho during this period.

Of the total number of children with diarrhea who sought treatment at health establishments in Ventanilla, 47 percent received zinc. This represents significant progress, considering that this intervention has only recently begun and advocacy is still being carried out with medical professionals who have proved somewhat reluctant to introduce zinc for the treatment of diarrhea. According to the follow-up records kept for Ventanilla, the majority of children consumed all 10 tablets, and completed the treatment regimen.

Due to the multiple causes of diarrheal disease, such as lack of access to basic sanitation, it is difficult to measure the contribution of the introduction of zinc to the reduction in the incidence and prevalence of diarrhea. However, the prevalence of diarrhea from January to April 2012 is slightly less than that registered during the same period in 2011.

**Significant increase in child growth and development monitoring coverage in Ayacucho**

In Ayacucho, the improvement of child growth and development monitoring coverage is notable. The increase between 2009 and 2011 ranged from 18 to 25 percentage points, depending on the age group. These results are interesting, given that coverage is regularly higher among children under age one, linked to vaccinations, and usually drops off significantly in children older than one. The introduction of micronutrient supplementation has helped improve the coverage of child growth and development monitoring because the supplement is included in the monitoring. This has motivated families to attend the clinics and has enabled health staff to perform closer monitoring. It should be noted, however, that this is not the only factor which has influenced this indicator.



Source: Multi-Micronutrients: Strategy Monitoring System (Health Information System, CRED growth monitoring forms)

**More than 250 community and municipal health promoters effectively monitor the consumption of micronutrient supplement and zinc treatment for diarrhea**

More than 250 community and municipal agents in Apurímac and Ventanilla reinforce their capacity for providing information to families on the importance of preventing and controlling micronutrient deficiency, along with micronutrient supplementation and zinc treatment for diarrhea. One key element in the effectiveness of both strategies, which has been strengthened, is monitoring of consumption at home. These community and municipal promoters carry out this home monitoring with the support of health personnel.



A municipal health promoter monitors zinc consumption during a home visit in Ventanilla district

**ACTIVITIES**

**Advocacy to institutionalize a national policy**

- **Promoting the update of Ministry of Health guidelines and regulations to include micronutrient supplementation and zinc treatment for diarrhea**

Technical assistance was provided to the Ministry of Health on the drafting of guidelines for preventive micronutrient supplementation. These guidelines are currently in the final review stage before being sent to the Minister's Office. Technical assistance is also being provided for the drafting of regulations on the prevention and control of micronutrient deficiencies, which includes micronutrient supplementation and zinc treatment for diarrhea strategies. These statutory documents are vital for the institutionalization of both interventions and will allow for the acquisition of these products with resources from the Ministry of Health.

- **Keeping micronutrient supplementation and zinc treatment for diarrhea on the national and regional agendas**

In July 2011, the Peruvian government changed and new health authorities were appointed. Advocacy work was conducted to keep the micronutrient supplementation strategy on the agenda and enable its expansion to 16 regions, along with the therapeutic administration of zinc for diarrhea.

- **Strengthening civil society spaces to continue promoting micronutrient supplementation**

Participation was continued in the "No Anemia" group led by the Committee for Concerted Action in the Fight against Poverty and composed of civil society, international cooperation and government organizations. This network has been advocating for the reduction of anemia in the country and the incorporation of micronutrient supplementation.

### **Strengthening the capacities of health and other social sector personnel**

- One of the greatest challenges this year has been expanding the micronutrient supplementation strategy to 13 new regions, in addition, to the three regions where the strategy was started in 2009. For this purpose, technical assistance has been provided to the national team from the Ministry of Health and the Ministry of Development and Social Inclusion to build the capacities of staff in the 16 regions.
- The capacities of the national team of monitors have been strengthened. This team is made up of 10 physicians, nutritionists and nurses who have supported the implementation of multi-region and regional training workshops on micronutrient supplementation and who play a key role in monitoring the intervention.
- Technical support has been provided on the content and organization of three multi-region meetings to train health personnel in the implementation of the strategy, two of which involved direct UNICEF participation.
- In the regions of Apurímac, Ayacucho, Huancavelica, Cusco and the District of Ventanilla, support has been given to capacity-building meetings and workshops for health personnel. In Apurímac and Ayacucho, close to 200 health professionals have been trained on hemoglobin monitoring. Based on monitoring of 48 health establishments, a significant improvement was observed in the quality of information on anemia. In all the regions, support was provided to training right down to the local level in the districts where UNICEF works.
- In Ayacucho and Ventanilla, 150 health professionals were trained in zinc treatment for diarrhea. In Ventanilla, a renowned researcher was contracted to educate and provide evidence to pediatricians who have shown a reluctance to use zinc in the treatment of diarrhea.

### **Strengthening social communication strategies to promote micronutrient consumption**

To improve household practices on the consumption of micronutrient supplements and zinc, strengthening the communication and community outreach strategies have been prioritized.

- A qualitative survey was conducted in the regions of Apurímac, Ayacucho and Huancavelica to determine the opinions of families and health personnel on micronutrient supplementation. The results show that families greatly value the benefits of micronutrient supplementation for the development of their children. However, information on the frequency and form of micronutrient supplement consumption needs to be improved further. These results have suggested improvements to the strategy's communication plan, which will be applied to the 16 intervention regions. Based on the survey, radio spots and micro-programs are being developed.

- Community health agents from Apurímac, Ayacucho and Ventanilla have been trained in micronutrient deficiency and supplementation. In Apurímac and Ayacucho, micronutrient supplementation was incorporated into community health surveillance systems. This has made it possible to monitor the receipt and consumption of the supplement, hold demonstrative sessions and create a space for families to share their experiences. Apurímac has had the best experience on a community level, where community authorities who share a concern for the reduction of micronutrient deficiency also participated in visits to families.
- In Ventanilla, the capacity of 98 community and municipal promoters was strengthened to monitor the consumption of the zinc supplement through house calls. Their capacities for participatory counseling and interpersonal communication have also been reinforced. The follow-up performed is recorded in monitoring records that help the health team and the municipality continuously improve the intervention.

**Micronutrient supplementation, zinc treatment for diarrhea, and supply of micronutrient supplement and zinc tablets**

- Since 2011, the National Food Assistance Program (PRONAA) has taken on the purchase of micronutrient supplements for the 16 regions that are part of the strategy. In these regions, supplementation has been planned for 424,665 children who are registered in the Comprehensive Nutritional Program which is aimed at children living in poverty and extreme poverty.
- The distribution of micronutrient supplements started progressively in October 2011 and had reached all the regions by December 2011. Distribution to all health establishments in each region was completed by early 2012.
- The conditions for monitoring micronutrient deficiency in health establishments have been improved. The majority of regions have purchased portable equipment for hemoglobin testing with public budget funds. In Apurímac, 155 establishments now have this equipment



A mother receives the micronutrient supplement for her child at his growth and development check-up at Ayacucho Health Centre

- The zinc treatment for diarrhea strategy is being implemented in 22 health establishments in Ayacucho and Ventanilla. A total of 1,030 children have received treatment between 2011 and June 2012. The experience developed in Ayacucho and Ventanilla has helped improve the intervention protocol and develop monitoring instruments. Nationwide, the zinc tablet is included in the National Register of Medicines, and once the clinical guidelines receive ministerial approval, the sector will be in a position to acquire it.



A child receives a zinc tablet in Ventanilla district

### Monitoring, evaluation and research

- Technical assistance continues to be provided to the national team responsible for monitoring and evaluating the micronutrient supplementation strategy and the technical teams from the regional health bureaus. As a result of this effort, there has been a marked increase in the reporting of information on micronutrient supplementation via the Health Information System, especially in the regions of Ayacucho and Huancavelica.
- Improvements have been made in the reporting of micronutrient supplementation and zinc in the Medications and Pharmaceuticals Information System which reports on the stock of the supplement in health establishments. One important advance has been the inclusion of a special code for micronutrient supplements in the Comprehensive Health Insurance information system, which is related to the financing and evaluation of results-based budgets.
- Technical and financial support has been provided to the Bureau of Epidemiology at national and regional levels for the implementation of sentinel surveillance centres for the micronutrient supplementation strategy, particularly with regard to supervision and evaluation. Thanks to this strategy, it has been possible to gather timely information on the effectiveness of the intervention which has been presented in regional and national evaluations.
- In the regions of Apurímac, Ayacucho and Huancavelica, evaluations were performed every six months to determine the progress of the micronutrient supplementation strategy and the improvements to be implemented. As a result of these evaluations, the medical laboratory service was identified as a critical point in Ayacucho, given that it did not have adequate equipment and the evaluation and diagnosis technique was

inadequate. In response, training and standardization workshops for hemoglobin testing were proposed. In this region, anemia and micronutrient supplementation are indicators on the performance management agreements of the regional health bureau.

- One of the most important elements in any strategy is local monitoring and follow-up. The national team of facilitators has monitored the regions to oversee the implementation of the strategy. Follow-up at the regional and local levels has also been performed by region.
- Information reported through the regular health systems on the therapeutic administration of zinc has improved. Through close monitoring, the main problems in the registration of information were determined, particularly in the case of children who receive emergency care, which was not being reported in the Health Information System. Records for these children have now been incorporated.
- In March 2012, an event was organized to present the preliminary results of the study of the efficacy of micronutrient supplementation with 10 mg of zinc. The presentation included participation by the Micronutrients Advisor at UNICEF Headquarters, a representative of the Latin American International Zinc Association, national health authorities, scientific institutions and non-governmental organizations. The first draft of an article to be submitted to a scientific journal has been written, after which the results will be disseminated.



Technical assistance to improve health information as part of the zinc and micronutrient supplementation strategy in Ventanilla

## CRITICAL FACTORS AND CONSTRAINTS

- There is currently a serious micronutrient supplement supply issue due to quality problems detected in the product acquired by the National Food Assistance Program (PRONAA). After detecting the problem, the supply inputs were frozen and in many cases are about to expire. As a temporary measure, supplementation with ferrous sulphate syrup has been recommenced.
- Another major difficulty in the implementation of the micronutrient supplementation strategy has been the irregular and late supply of the product. Due to lengthy bureaucratic processes, the PRONAA, which is responsible for the supply, was unable to complete the purchase of the supplement by the established deadline, causing a shortage expected to last one to three months and the subsequent postponement of the start of the program's expansion.

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- Currently, only children who are part of the Comprehensive Nutritional Program are to receive micronutrient supplements, which will lessen the impact on the reduction of micronutrient deficiency achieved through a universal strategy. UNICEF has advocated with the Ministry of Health to universalize the strategy to target all children under three in the future, and agreement to do so, in principle, has been reached.
- The micronutrient supplementation strategy's communication component is still one of its weak points, due partially to the weakness of the technical team in the health sector.
- The change of authorities at the District of Ventanilla health network has weakened the micronutrient supplementation and therapeutic zinc strategy due to a lack of commitment and limited information among the new authorities. This has made it necessary to initiate an intensive advocacy process. Additionally, the purchase of micronutrient supplement by the municipality through the UNICEF procurement system for the "Goodbye Anemia" program has still not been cleared through customs due to problems in the regulations established by the General Directorate of Medicines, Supplies and Drugs. Quality control of the product is being conducted in order to authorize its entry into the country.
- The implementation of funds in 2012 was limited due to a delay on the part of the Peruvian government in approving the new UNICEF-PERU 2012-16 Country Program Agreement, causing restrictions on the transfer of funds and other financial operations. In response, UNICEF focused on advocacy actions that didn't require funds transfer or supplies, on technical assistance, and on the mobilization of resources from partners. The agreement was signed in late June.

## LESSONS LEARNED

- Gathering evidence on the strategy's progress is essential when trying to convince authorities to keep the issues on the public agenda.
- The significant impact of the pilot micronutrient supplementation program seen in national surveys was possible due to the universalization of the strategy in the first three regions - all children under three in the pilot regions were targeted with the supplement.
- Social communication strategies for improving practices in the home are key as they focus on influencing the opinion of the person most directly taking part in the Intervention.

- The development of community strategies to reach families is indispensable to ensuring the effectiveness of nutrition and public health interventions. It is not sufficient to simply guarantee adequate supply of the service
- It is vital to consider and address the opinions of professionals who have influence on the execution of a strategy in order to ensure its success. This may include planning actions to encourage their motivation and commitment. This has been the case with physicians responsible for therapeutic zinc administration who have shown a reluctance to use it.

## FUTURE WORKPLAN

The work plan for the next year will focus on ensuring the continuity of micronutrient supplementation with the Ministry of Health and creating the conditions to expand zinc treatment for diarrhea to more areas. Actions will be oriented toward:

- Advocacy with the Minister and Vice Minister of Health to introduce micronutrient supplementation into the regular health program budget. In June, it was announced that the National Food Assistance Program (PRONAA) would be shut down in 2013, and thus would no longer be procuring micronutrient supplements. To ensure the continuity and universality of micronutrient supplementation, it will be necessary for the Ministry of Health to assume the purchase of the supplement. Following recent discussions with UNICEF, the Ministry of Health has agreed to take on the purchase of micronutrient supplements for 2013.
- Technical support to the Ministry of Health to finish drafting the necessary regulations allowing for the incorporation of micronutrient supplementation and zinc treatment for diarrhea into the regular health programs.
- Supporting expansion of the zinc treatment for diarrhea strategy to other areas where UNICEF provides cooperation.
- Technical assistance to the Ministry of Health to strengthen micronutrient supplement quality control processes.
- Continuing capacity building for health personnel in the prevention and control of micronutrient deficiencies, especially zinc and iron.
- Strengthening the micronutrient supplementation social communication strategy.
- Strengthening information and evaluation systems for the micronutrient supplementation and zinc treatment for diarrhea strategies. There are plans to further

Document the micronutrient supplementation strategy in the first three regions to gather evidence of its effectiveness in Peru.

- Capacity building in local and regional governments for the mobilization of financial resources allocated for micronutrient deficiency prevention and control interventions.
- Completing and distributing articles on the effectiveness study on micronutrient supplementation with 10 mg of zinc on the severity and duration of diarrhea.

### MICRONUTRIENTS HELP KEEP MALNUTRITION AT BAY IN PERU



Four-year-old Julissa was diagnosed with anemia through the nutrition program in Rosaspata, Peru. After treatment with micronutrient supplementation, she is now healthy.

In the Andean community of Rosaspata, in Ayacucho, Peru, a community health promoter has invited children, their parents and a health centre representative to the local community hall for the area's biweekly child nutrition program.

Villagers here are eager to talk about the UNICEF-supported program, which has helped reduce cases of malnutrition and micronutrient deficiency among Rosaspata's youngest children.

There are 60 children under three in the seven neighbourhoods that make up Rosaspata, said the health promoter as he displayed a table listing every child's name, date of birth, weight, height, medical check-up dates and hemoglobin levels, which help detect anemia. For children diagnosed with malnutrition, the table also shows intake stages of micronutrient supplement.

These meticulous records and the program's supply of nutritional supplements have helped Rosaspata give its youngest residents a healthy start in life.

"We are committed to working for our children under three so they may be healthy and well. That is how our community will progress," said Ramiro Llamocca Rodríguez, the mayor of Rosaspata. "The micronutrient supplement has helped to improve the diet of the children and fight anemia."