In the context of the Millennium Development Goals, we dedicate this second edition of Challenges to the issue of child malnutrition in Latin America and the Caribbean. Malnutrition is simultaneously a cause and an effect of the lack of development opportunities for a significant proportion of the region’s children. In this issue, we have sought to provide a situation analysis of child malnutrition in the region, as well as an overview of the policies required to overcome the problem.

In order to make progress towards the Millennium Development Goals in this field, joint work and coordination among United Nations agencies and national institutions is vital. We have attempted to implement this approach in this second edition of Challenges: UNICEF, ECLAC, and the World Food Programme (WFP) have joined forces in producing the lead article presented here, which highlights the need to undertake efforts in highly diverse areas that, directly or indirectly, affect the nutritional status of children.

In addition, we present the arguments put forward by Michelle Bachelet, President of Chile and a paediatrician, calling on governments and civil society to mobilize for children’s rights to adequate nutrition. We also summarize concerns and proposals on the issue set forth by indigenous adolescents from the region.

With this second edition, in electronic and printed formats, we propose to continue raising awareness among governments and civil society regarding the urgent need to progress toward the Millennium Development Goals and the fulfilment of children’s and adolescents’ rights in the region.
Recent events

**UNICEF organized events on nutrition for children, adolescents and women**

On 9–12 November, Panama City hosted two events: “Improving nutrition to achieve the Millennium Development Goals,” which addressed the nutrition issue and priority interventions to guarantee the right to adequate nutrition, as well as the “Global Consultation on the use of multiple micronutrient supplements.”

**Seventh Ibero-American Conference of Ministers and High-Level Authorities on Issues relating to Children and Adolescents**

Assembled in León, Spain on 26–27 September, representatives from 21 countries committed to promote policies to fight poverty and favour the protection of children.


**ECLAC presented Social Panorama of Latin America, 2005**

According to this study, between 2003 and 2005, the number of poor people in Latin America decreased by 13 million. Nonetheless, poverty continues to be unacceptably high, affecting 213 million people (40.6%), of whom 88 million (16.8%) live in extreme poverty.

More information: http://www.cepal.org

**ECLAC and the WFP published documents on hunger, malnutrition and poverty**

In the framework of the technical cooperation agreement between these institutions, two new sub-regional studies on these issues were published in the last quarter of 2005.

More information: http://www.cepal.org/dds

**Girls, boys, and young people: The missing face of AIDS**

On 11 November, UNICEF and the Joint United Nations Programme on HIV/AIDS (UNAIDS) launched a 5 year campaign in San Salvador to step up support for the millions of girls, boys and adolescents affected by HIV/AIDS in the region.


**First International Congress on Food Security and Nutrition**

This event was convened by the Instituto Colombiano de Bienestar Familiar (ICBF) and held in Bogotá, on 4–6 October 2005, with the support of the Food and Agriculture Organization of the United Nations (FAO), Fundación Éxito, the Food and Nutrition Improvement Plan for Antioquia (MANA), the World Food Programme (WFP) and the Pan American Health Organization (PAHO).

More information: www.icbf.gov.co/espacion/congresoseg.htm

**Health and nutrition issues that concern indigenous adolescents**

- Our communities do not have enough health care services and the ones that do exist are of poor quality.
- Many children die of preventable conditions such as influenza, malaria and other parasite-borne diseases, malnutrition, and diarrhoea.
- Urban mothers are not well informed on the importance of breastfeeding. Rural mothers do know, because their ancestors have taught them. They breastfeed their children until they are a year and a half.
- Nutrition is no longer based on our traditional foods and diets are not well balanced.

Roles of the family, the community and the State in confronting health and nutrition problems

- We adolescents must get involved and learn more about health problems.
- Communities must be educated to better confront the problems caused by malnutrition.
- Mothers must be educated to breastfeed their babies.
- Pregnant women should receive free health care.
- The State must look after the health and nutrition of children and adolescents, because they are the future and the present.

http://www.unicef.org/spanish/media/media_27506.html

Indigenous adolescents speak out on health and nutrition

"Health is total well-being, the balance between mind and spirit"

**Health and nutrition issues figured prominently at the Ibero-American Meeting on the Rights of Indigenous Children and Adolescents, which was held in Madrid on 7–8 July 2005.**

Working in groups, participating adolescents presented their concerns and suggestions. They also took on commitments regarding the actions that they are willing to undertake in order to combat malnutrition.

http://www.cepal.org/dds
Child malnutrition in Latin America and the Caribbean *

Rodrigo Martínez and Andrés Fernández,
Sociologists of ECLAC Social Development Division

*This article is based on the results of the Technical Cooperation Agreement between the World Food Programme (WFP) and the Economic Commission for Latin America and the Caribbean (ECLAC), which is underway since 2003.
I. Child malnutrition and the Millennium Development Goals

Malnutrition in children under five years of age increases the risk of death, inhibits their physical and cognitive development and has lifelong effects on their health. Addressing this problem is indispensable for ensuring the survival and development of Latin American and Caribbean children, as well as guaranteeing social and economic development in the region.

Our region’s nutritional situation is yet another indicator of social inequalities, and both a cause and an effect of poverty. While sufficient foodstuffs are produced in the region to fulfil the caloric requirements of three times the current population, 53 million people have insufficient access to food. The region’s nutritional situation is extremely diverse, with a great deal of disparities both between and within countries. These differences are expressed in terms of both the intensity with which the different factors of nutritional vulnerability manifest themselves, as well as in the different stages of the demographic and epidemiological transitions that the countries are undergoing.

It should be noted that, to greater or lesser degrees, the population of the region is affected by both insufficient food intake and imbalances in dietary composition. The latter involves the lack of micronutrients (iron, iodine, zinc, and vitamin A), and a growing excess of macronutrients rich in saturated fats, which leads to obesity and other pathologies.

Adequate child nutrition is directly linked to the achievement of the Millennium Development Goals (MDGs). If special efforts are not made to tackle the most prevalent nutritional problems affecting the region’s children (underweight, chronic undernutrition and micronutrient deficiencies), progress towards all of the MDGs will be severely hindered (see box 1).

When monitoring the Millennium Development Goals, chronic undernutrition (stunting, or low height for age) should be considered as an additional indicator to undernutrition (underweight, or low weight for age). Chronic undernutrition affects 8.8 million children under 5 (16%) in the region and reflects the cumulative results of the lack of adequate nutrition during the most critical years of a child’s development—from the intrauterine stage through the first three years of life. Its effects are largely irreversible and are closely linked to extreme poverty. The situation is particularly serious in Central American and Andean countries. Guatemala presents the highest prevalence in the region, surpassing averages in Asia and Africa. In contrast, the English-speaking Caribbean countries do not display significant differences between underweight and stunting. (see figure 2).

Nutritional studies covering the past two decades show that the region has made important progress towards reaching the goal of reducing undernutrition (55%). However, there are considerable disparities between countries. While some have reached the goal, others have made very little progress, or have even regressed (Argentina, Costa Rica, Ecuador and Paraguay). In terms of chronic undernutrition, progress in its reduction has been slower during the 1990s (from 19.1% to 15.8%).

It should be stressed that national averages do not reflect the broad disparities that exist within countries. For example, a child living in a rural area is between 1.5 and 3.7 times more likely to be underweight than a child living in an urban area. Similarly, indigenous children are four times more likely to be underweight than urban children. Andean and Central American countries provide clear examples of this situation.

“...The region’s countries produce enough food to cover their populations’ needs, yet 16% of their children suffer from chronic undernutrition..."
Box 1: The Millennium Development Goals and their links to hunger and malnutrition

1. ERADICATE EXTREME POVERTY AND HUNGER
- Malnutrition erodes human capital through its intergenerational and irreversible effects on physical and cognitive development
- Poverty prevents people from producing or acquiring the food that they need

2. ACHIEVE UNIVERSAL PRIMARY EDUCATION
- Hunger reduces school attendance and impairs learning capacity
- Lack of education reduces income generation capacity and increases the risk of hunger

3. PROMOTE GENDER EQUALITY AND EMPOWER WOMEN
- Hunger reduces school attendance amongst girls more than boys
- Women lack the support of men in domestic tasks. They tend to subordinate their own nutritional health to benefit the rest of the family. Since malnourished women are more likely to give birth to underweight babies, this exacerbates nutritional vulnerability, which is transmitted from generation to generation

4. REDUCE CHILD MORTALITY
- Over half of all child deaths are directly or indirectly caused by hunger and malnutrition

5. IMPROVE MATERNAL HEALTH
- Malnutrition and micronutrient deficiencies significantly increase the risk of maternal death

6. COMBAT HIV/AIDS, MALARIA AND OTHER ILLNESSES
- Malnutrition can increase the risk of HIV transmission, reduce the effectiveness of antiretroviral therapy and speed up the onset of AIDS
- Undernourished children are twice as likely to die from malaria
- Malnutrition increases the risk of acquiring tuberculosis

7. ENSURE ENVIRONMENTAL SUSTAINABILITY
- Hunger increases the likelihood of an environmentally unsustainable use of resources
- Restoring and improving ecosystem functions is fundamental to reducing hunger amongst the rural poor
- Access to safe drinking water and basic sanitation is essential to ensuring that foods are safe for consumption

8. DEVELOP A GLOBAL PARTNERSHIP FOR DEVELOPMENT
- Greater international cooperation and a better allocation of resources could have positive effects on children’s access to healthier and more balanced nutrition

2. Main factors leading to food and nutritional vulnerability

Food vulnerability reflects "the probability of an acute decline in food access, or consumption, often in reference to some critical value that defines minimum levels of human well-being." Nutritional vulnerability refers to biological factors which in turn are related to the quality of the diet and an individual's state of health, amongst other aspects. Thus, the most vulnerable population is made up of those who on one hand face greater risks and, on the other, have a limited capacity to respond to these risks.

In this approach, vulnerability should be analysed in terms of two interacting dimensions: the conditions present in the environmental, social and economic context, and the individual and collective capacity and will to address them.

a) Environmental factors

Based on available information, it may be asserted that approximately half of all nutritional problems occur in rural homes located in areas that are exposed to environmental risks. The highest levels of malnutrition and infant mortality are found in countries where agriculture is often affected by natural disasters. Frequent hurricanes, droughts, earthquakes and frosts create "direct" risks that obstruct access to foodstuffs, as well as "indirect" risks brought about by the economic and social problems caused by these events.

In addition, undernourished children often live in homes without potable water and basic sanitation. This increases the risk of contracting infectious illnesses, mainly parasite-borne and diarrhoeal diseases, creating a vicious circle in which environmental factors lead to the development of malnutrition. In the Andean countries, for example, the prevalence of undernutrition in homes with water from unsafe sources (rivers, lakes or wells) is 11-15%, approximately twice as high as in homes with access to "tap water" (6%).

b) Social, cultural and economic factors

As can be seen in figure 3, undernutrition is closely related to extreme poverty. However, they both present specific characteristics and cannot be dealt with as a single phenomenon. The numerous poverty-related factors leading to undernutrition include the following:

- Low incomes limit access to food in terms of quantity, quality or both.
- The lack of access to land limits access to credit and other resources, with repercussions on income.
- Replacing traditional crops with more profitable cash crops tends to increase nutritional vulnerability and reduce access to food when prices drop, or in times of economic crisis.
- Low levels of parental education – especially in mothers – and lack of knowledge on reproductive health, nutrition and child development have a negative impact on child nutrition. In

**“In this region, the rural poor and indigenous and afro-descendent groups, who tend to have low educational levels and limited access to water and sanitation services, are the most vulnerable to hunger and malnutrition.”**
Andean countries, for example, the prevalence of undernutrition is 30%-40% lower among children whose mothers completed primary education.

- The lack of access to and deficient quality of primary health care services and specific health and nutrition interventions are another major obstacle.

- The situation of indigenous peoples, characterized by extreme poverty, discrimination and geographic isolation is closely linked to the high prevalence of undernutrition among indigenous children. In countries with large indigenous populations, undernutrition is up to 140% higher among children from indigenous homes.

- The loss of social capital and the dismantling of support networks for the poorest people, as a consequence of migratory processes and social conflicts, limit the collective response capacity to natural or economic disasters, which obstruct access to food.

c) Biological factors

Among the most important biomedical factors are the following:

- Deficient maternal nutrition, as a consequence of pre-existing nutritional deficiencies, increases the risk of intrauterine undernutrition and low birth weight.
- The lack of exclusive breastfeeding (six months) exposes children to a diet which fails to satisfy the nutritional requirements of that stage of development, and this in turn poses serious health risks.
- The limited availability of complementary foods, as of the sixth month of life, hinders the provision of the required macro- and micronutrients for normal child development during this period of maximum growth and development.

3. The effects of child malnutrition

Child malnutrition has a series of negative consequences in several areas. Most crucially, malnutrition has an impact on morbidity and mortality, and on education and productivity, thus constituting one of the major mechanisms for the intergenerational transmission of poverty and inequality.

- Prenatal undernutrition increases the risk of low birth weight, which in turn increases the risk of neonatal mortality. Babies with a birth weight of 2,000–2,499 grams are four times more vulnerable to neonatal mortality than babies with a birth weight of 2,500–2,999 grams, and 10 to 14 times more vulnerable than newborns weighing of 3,000–3,499 grams. Several studies have shown that malnutrition is the chief contributing factor of infant and pre-school mortality (50%-60% of cases). The proportion of morbidity cases attributable to malnutrition is 61% for diarrhoea, 57% for malaria, 53% for pneumonia and 45% for measles. Malnutrition also significantly increases the risk of developing chronic pathologies in adulthood, including as coronary disease, hypertension and diabetes, as well as contagious diseases such as tuberculosis.

- In terms of micronutrients, iron deficiency anaemia is, along with chronic undernutrition, the most serious nutritional problem in the region, affecting mainly children under 24 months and pregnant women, and negatively affecting school performance and productivity. Vitamin A deficiency reduces the immune system’s response capacity to several infections, causes blindness, and increases the risk of maternal and infant mortality by up to 25%. Iodine deficiency is the main cause of mental retardation and can reduce the intellectual quotient (IQ) by approximately 10 points.

"The effects of malnutrition on health, education and productivity make it one of the main mechanisms for the intergenerational transmission of poverty and inequality."
The effects of malnutrition on education are equally alarming. Malnutrition has an impact on school performance owing to the deficit generated by its associated diseases, and the limited learning capabilities associated with diminished cognitive development. A higher incidence of illness results in late entry to the educational system and higher absenteeism among children suffering from malnutrition. This in turn increases the incidence of grade repetition and school dropouts. Micronutrient deficiencies, particularly of iron, zinc, iodine, and vitamin A, result in cognitive limitation, which leads to reduced learning. This is illustrated by a longitudinal study implemented in Chile, which shows that average grade repetition is 65% higher among malnourished children.

In terms of productivity, the consequences of malnutrition are directly linked to low educational levels and the aforementioned learning difficulties. Mortality associated with malnutrition generates a significant loss of human capital, with cumulative long-term economic and social impacts. Therefore, in addition to the ethical imperative which demands that solutions be found to this problem, policy decisions should also consider the economic costs entailed by malnutrition to society as a whole.

### 4. Policy recommendations to combat child malnutrition

Due to the complex and multicausal nature of child malnutrition, nutrition and food security policies and programmes should become national policies with a comprehensive, long-term perspective. In particular, the fight against chronic undernutrition requires sustained efforts and commitments.

It is essential to target interventions on children under 3 and pregnant and lactating women, all of whom are undergoing crucial nutritional vulnerability periods within their life cycle. Within this framework, a general set of policy guidelines follows, some for relatively short-term and others for longer-term implementation:

- Promote breastfeeding (exclusive until 6 months of age), providing appropriate conditions for working mothers.
- Maintain and improve programmes for the fortification of food with micronutrients, which have proved to be highly cost-effective in reducing gaps in health, learning, and productivity.
- Provide food supplements and promote their consumption among pregnant and lactating women, and also for infants and preschool children.
- Promote and improve food consumption practices based on highly nutritious local and traditional products, taking into account cultural and ethnic diversities.
- Establish cash and food transfer programmes for people living in extreme poverty, in return for participation in primary health care and education services, community work, training, literacy programmes, etc. Several countries in the region have adopted this approach, with programmes that have been positively assessed so far.
- Strengthen preventive actions, especially through public information programmes, education in food and nutrition, and communicating best practices on child care, hygiene, parasite elimination, healthy food habits, and food handling and preservation, targeted at the most vulnerable groups.
- Institute or optimize emergency food assistance systems for situations of conflict or natural disaster, ensuring direct support for children and their mothers.

“The eradication of child malnutrition in the region requires that countries develop comprehensive, long-term national policies, with the active participation of all actors.”

- Improve investment in and management of education and health services, in order to extend coverage and increase the quality of services provided, so as to achieve higher levels of food security and access to health care; improve water and sanitation infrastructure in marginal areas in order to reduce the transmission of diseases associated with malnutrition; improve irrigation infrastructure in order to increase agricultural productivity in dry areas; improve access roads to facilitate trade in local products and food distribution in emergency situations.
- Facilitate access to productive assets including land, equipment and financing for the most vulnerable families. This should be complemented with soil improvement, water management and food storage programmes, as well as actions to enhance productivity and diversification, especially for subsistence farmers.
- Improve the production of agricultural goods through investment in new technologies, training and hygiene, especially in terms of food handling in commercial establishments and in households, along with effective health supervision to protect children from diseases originating in the various stages of production and distribution.
- Advocate a fair international trade system for agricultural goods, especially regarding the effects of subsidies and other protection mechanisms implemented by developed countries. Despite facilitating access to food for some sectors of the population, these measures limit the competitiveness of the region’s small and micro agricultural producers (who are usually the most vulnerable) as well as local food security.

2/ Economic Commission for Latin America and the Caribbean (ECLAC)/World Food Programme (WFP) (2005): Hambre y desigualdad en los paises andinos. La desnutrición y la vulnerabilidad alimentaria en Bolivia, Colombia, Ecuador y Perú. Politicas Sociales Series Nº 112, LCI, 2400-P 
Human resources constitute the greatest asset of any country. Historically, the main priority of developing countries has been the exploitation and extraction of their natural resources which, by their very nature, are vulnerable to depletion, and then economies are forced to shift to other areas. Human resources, however, are not always considered irreplaceable assets that are being eroded, nor as the cornerstone of development.

If a country does not attend to its people, support them, provide them with opportunities, or establish effective collaboration and protection mechanisms for its citizens, it is unlikely that it will ever be able to make the leap into development.

For decades, specialized literature has discussed the relationship between nutrition, poverty and underdevelopment, analysing correlations and attempting to establish causalities. Chile may feel proud in this respect. Our country is a good example of the fact that a country does not need to attain higher levels of development to defeat malnutrition and that malnutrition can be defeated even under persisting conditions of poverty. What really matters is having the political will and a national consensus to overcome this problem.

When Chile embarked on the battle against malnutrition in the 1950s, 70% of our children under six suffered from some degree of malnutrition. At present, this figure does not exceed 1.2%. In 1951, child mortality rates were the highest in Latin America, at 130 per one thousand live births. Today, we have the lowest mortality rate, with 8 per one thousand live births. Throughout these years, Chile has gone through different governments, dramatic political problems, and high poverty rates, yet it has maintained an iron will and belief in children’s health and development.

All the Latin American and Caribbean countries are now parties to the Convention on the Rights of the Child. This fact, which may have once been perceived as a diplomatic success, actually involves a strong mandate for states and an opportunity for citizens and families. The Convention recognizes that children have rights, which used to be considered as “needs” that “could be” met. Today, child hunger is not a need that the government in office may choose to deal with or not; today, child nutrition is a basic right that governments must comply with.

Proper child nutrition begins before a child is born; it must be a priority for pregnant women. It is not only a matter of children being born healthy and surviving, but also of ensuring their proper development. Nutrition must be ensured in the long term and considered in the design of public policies.

If our intervention in children’s nutrition is timely, the economic costs to be faced by our countries will be much lower than the cost of dealing with the illnesses caused by poor nourishment. I am well aware of this as a physician: when malnutrition strikes in the first 24 months of life, the risk of mortality and morbidity increases significantly, the child’s growth and development are impaired, and the negative consequences extend throughout adolescence and into adulthood.

Economists often interpret the effects of poor nutrition as “a diminished capacity for work”. We are talking about persons who will never be able to develop to their full potential. I say this because it is an issue that should mobilize our political and entrepreneurial classes, researchers, academics and families themselves.

This is why our government programme addresses this topic specifically. We want to eliminate inequalities generated at such early ages: during pregnancy and during the first months and years of life. Our Plan for Equality from Childhood seeks to implement strong measures, with plans to reinforce maternal and child health care, and to provide nursery care for all children of working mothers and an extensive pre-school education programme.

This is our government’s vision. Citizens increasingly urge and require us to be more effective in our policies and more efficient in our programmes. The fight against malnutrition in Chile is an example of how we should work, with a united national vision. Our task today is the fight against inequality and, once again, our children are at the core. For them and for our future, for Chile and its people.

“(... ) a country does not need to attain higher levels of development to defeat malnutrition (...) What really matters is having the political will and a national consensus to overcome this problem.”

Michelle Bachelet, President of Chile and paediatrician:

“Countries cannot develop without human development and adequate nutrition”
Nutrition programmes

In the past few years, the region’s countries have promoted a wide range of programmes to tackle food insecurity and nutritional vulnerability suffered by groups living in extreme poverty.  

Three types of programmes are particularly relevant for the child population: (i) maternal and child health programmes that promote breastfeeding and deliver food supplements to pregnant and lactating women, as well as infants and pre-school children; (ii) school feeding programmes, which provide meals to children and adolescents who attend public and private schools; and (iii) micronutrient fortification programmes, for groups at social risk.

Different stakeholders participate in these programmes, and international organizations often provide support. The programmes incorporate a comprehensive vision, in which nutrition is considered both an end in itself and a means to attain other objectives, thus linking health targets with nutritional and educational goals.

Studies emphasize the importance of considering the following factors when designing and implementing these types of programmes:

a) Definition of nutritional standards appropriate to the population’s profile and the intervention’s objectives, so as to avoid homogeneous food transfer among populations with diverse needs.

b) Targeted interventions, based on poverty maps, nutritional criteria, gender indicators, school availability and life cycles.

c) Design and implementation of efficient monitoring systems, including nutritional surveillance systems. Many school nutrition programmes have used enrolment, attendance, dropout rates and, to a lesser extent, achievement indicators. Some initiatives monitor children’s nutritional situation using anthropometric indicators.

d) Impact assessment requires improving the instruments used at both the macro and micro levels. Complementary sources of information should be used, combining aggregate secondary data, with research-related information at the micro level.

Evidence emerging from impact assessments of both extended coverage and targeted school nutrition programmes is inconclusive and varies widely. However, there is stronger evidence on the positive potential of micronutrient supplement programmes focused on vulnerable groups.

1/ See the classification used in: Cohen, Ernesto and Rolando Franco, “Seguimiento y evaluación de impacto de los programas de protección social basados en alimentos en América Latina y el Caribe”, Background paper, August 2005.

2/ See ECLAC/WFP, 2005 and 2004, Hambre y desnutrición en los países miembros de la Asociación de Estados del Caribe (AEC) y Hambre y desigualdad en los países andinos. La desnutrición y la vulnerabilidad alimentaria en Bolivia, Colombia, Ecuador y Perú. ECLAC Políticas Sociales series, N° 111 and 312, LCS.2374-P and LC/L.2400-P, respectively.


Cited by Cohen and Franco, op.cit.
...that although the region produces enough food to meet the nutritional needs of three times the current population, 8.8 million Latin American and Caribbean children suffer from chronic undernutrition (stunting) due to a persistently inadequate nutritional intake, and 4.2 million are underweight? (ECLAC and United Nations system organizations, *The Millennium Development Goals: A Latin American and Caribbean Perspective*, 2005).

...that chronic undernutrition affects half of the children under 5 years of age of indigenous origin; that in rural areas under-fives are 1.6-3.7 times more likely to become undernourished than in urban areas; and that over 40% of the undernourished live in cities? (ECLAC/WFP, *Hambre y desigualdad en los países andinos. La desnutrición y la vulnerabilidad alimentaria en Bolivia, Colombia, Ecuador y Perú*, 2004).

...that, according to WFP estimates, the annual cost of fighting malnutrition in all children under 5 years of age in the region amounts to US$ 2.05 billion but the cost of not fighting it would be between US$ 104 billion and US$ 174 billion (owing to child mortality, productivity loss caused by growth delay and losses due to chronic illnesses, among other causes)? (WFP estimates based on World Bank and UNICEF statistics and the cost of WFP programmes in Latin America and the Caribbean; and WFP calculations based on data from the United Nations Millennium Project, *Task Force on Hunger: Halving Hunger: It Can Be Done*, and the World Bank).