
**REGIONAL STUDY ON SCHOOL HEALTH
AND NUTRITION IN LATIN AMERICA AND
THE CARIBBEAN**

World Bank/Pan-American Health Organisation

**Panama School Feeding Programs:
A situational analysis**

by

María Luisa Vázquez Navarrete
Consorti Hospitalari de Catalunya
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Introduction

Panama has a long tradition of school feeding programs. Initially these programs had little technical orientation and had only local coverage. From the 1950s they became systematised and increased in its coverage. A series of different programs, with various characteristics regarding provision and delivery of food, has been implemented over the years (Yangüez, 1999). Currently school children in Panama benefit from several feeding programs.

There are three main programs that cover an important proportion of school children: the Social Emergency Fund (FES/World Bank) Lunch program, a Snack program, and a Lunch program, which are both sponsored by the Ministry of Education . In 1999, they serve 1311 schools (FES/Programa Nacional de Nutrición Escolar, 1999b), 2,844 schools and about 500 schools respectively (Yangüez, 1999).

In addition, Fundación pro-niños del Darién provides breakfast and lunch to 70 schools (Yangüez, 1999). There are also smaller programs from the First Lady's Bureau and the Ministry of Agricultural Development that help the development of school gardens and chicken projects at school level (INCAP, 1998; Yangüez, 1999).

FES and the World Bank are launching an impact evaluation to examine the effect of Panama's school feeding programs on school attendance, educational performance and nutritional status. The first step will be to carry out a baseline evaluation. Part of the baseline study is the situation analysis presented in this document.

A study visit to Panama was carried out from 6 to 12 June 1999. The objective of the study was to describe the current situation of two school feeding programs, namely, the Social Emergency Fund (FES) Lunch program and the Ministry of Education (MINEDUC) Snack program (Annex).

Four groups of schools had initially been identified to be studied: schools with both programs, schools with either one of the programs and schools with no program at all. It emerged that the Snack program currently covers all public schools in Panama. It was also found that there is a new Longer School Days program (Programa de Jornada Ampliada), started in 1998, which is supported by the Ministry of Education that also provides lunch.

Thus, the 9 schools finally visited in the three provinces (table 1) fell into three groups: 3 schools with only Snack¹, 2 schools with Snack and Long School Days programs and 4 schools with both Snack and FES Lunch programs.

¹ When visited it was found that one of these schools was actually receiving a monthly provision of rice, beans and oil from the Christian Mission, and was able to offer 4 lunches a week to students.

All schools visited were in rural areas, and of small variable size (between 28-418 students). All schools were accessible by road, however, it was found that after leaving the main road, the roads to some schools were in very poor condition.

In order to achieve the objective, the following activities were conducted:

- Review of project documents, reports, statistics and any other program related literature.
- Interviews with the National Co-ordinator of the FES Nutrition Program, National Director of the School Health and Nutrition program of the Ministry of Education, Regional Nutrition Inspectors, School directors, teachers, parents and children.

Table 1: Location and programs of visited schools

Region				
Coclé	District	Sub-district	School	Program
	Penonomé	Penonomé	Ruben Darío Carles	<i>Crema/Long School Days</i>
	Penonomé	Pajonal	Membrillo	<i>Crema and cookies/FES Lunch</i>
	Penonomé	Coclé	Victoriano Lorenzo	<i>Crema</i>
Chiriquí	District	Sub-district	School	Program
	Tolé	Tolé Cabecera	Llano Limón	<i>Crema and cookies/FES Lunch</i>
	Tolé	Tolé Cabecera	Alto de la Arena	<i>Crema and cookies/FES Lunch</i>
	David	Chiriquí	La Pita	<i>Crema</i>
Veraguas	District	Sub-district	School	Program
	Cañazas	Cerro de Plata	Cerro de Plata	<i>Crema and cookies/FES Lunch</i>
	La Mesa	San Bartolo	El Marañón	<i>Crema and cookies</i>
	La Mesa	San Bartolo	El Juan	<i>Crema/Long School Days</i>

The following document introduces a description of the programs with their strengths and weaknesses, including the opinions of the main actors involved, followed by a description of common characteristics of all programs and school environments.

2. Ministry of Education nutrition programs²

The Ministry of Education nutrition programs have an overall objective to improve the nutritional status of the Panamanian school children in order to support their learning process. The nutrition related programs are Feeding programs (snack and lunch), Food Production and School Health. This document gives a detailed description of the Snack program. The Long School Days Program was not part of this study but, as it covers an important proportion of schools, it will be briefly introduced.

1.1 *Programa de distribución del vaso de leche y la galleta nutricional o cremas enriquecidas: Snack program*

This program provides a snack to children in public schools. It is usually distributed in the morning break, except for children attending school in the afternoon, who get the snack during their break. The snack consists of a glass of milk and enriched cookies, an enriched cereal-based *crema* and cookies, or enriched cereal-based *crema* only.

Objectives

To ensure that the school population attending public pre-school and primary school have access to a light snack to complement meals provided by the family, which will contribute to the well being of the student, in order to improve school performance (MINEDUC, 1996).

Target population and coverage

School children attending public pre-schools and primary schools constitute the target population of this program. Nowadays all public schools are reached, i.e. 2,844 schools and 372,446 students³ (Yangüez, 1999; MINEDUC 1999a,b).

Children that attend schools with a high number of students (urban and district capitals schools) receive a glass of milk and enriched cookies. Enriched *crema* and cookies are served to children attending schools with low or middle numbers of students, and which are in rural and indigenous areas of difficult access in the 28 poorest districts of the country. Schools that do not have the described characteristics receive enriched *crema* (Yangüez, 1999)⁴.

Program history

² This description is based on Ministerio de Educación (1996); Yangüez (1999) and interviews with the National Director, School Directors, teachers and parents.

³ According to the School Nutrition and Health Department Director, all schools are currently covered. The actual coverage is difficult to establish from the data collected on the number of schools that differs slightly in the different sources consulted.

⁴ Allocation of a particular type of snack to a school is related to the logistics involved in its distribution and preparation. More details are provided below under "Source and use of food".

The Vaso de Leche (glass of milk) program was started in 1991, and originally depended on the Ministry of Agricultural Development. This ran in parallel with the Alimentos Locales y Merienda (local food and snack) project, which started in 1987, and provided schools with rice, beans and oil for lunch, and cereals, evaporated milk and sugar for the snack. This program faced several difficulties, and finally disappeared in 1996. In 1994 the Vaso de Leche program was transferred to the Ministry of Education and was reformulated. In 1992 and 1996 the enriched cookies and cereal-based *crema* were respectively incorporated to the program. Initially it targeted the poorest districts and progressively increased with its budget and coverage (Yangüez, 1999). Law 35 of 1995⁵ established the program for all public pre-schools and primary schools of the country and was given four years to reach this target, i.e. in 1999. However, the vast majority of primary school children have been served by the program since 1997 (MINEDUC, 1999a).

Responsibilities and institutional links

The Snack program is the responsibility of the National Department of School Nutrition and Health of the Ministry of Education, which was created in 1987, and formally established in 1995 by means of Law 34. This Department participates in the National Nutrition Program (PRONAN), that co-ordinates different government instances, NGOs and research institutions working in the nutrition field (PRONAN, 1998). The annual budget is presented to the Ministry of Finance and Economy and makes its recommendations to the Legislative Assembly. Food purchasing takes place through the UNDP Mobilisation of Priority Investments Project (Proyecto de Dinamización de Inversiones Prioritarias) (Yangüez, 1999).

The National Department of School Nutrition and Health has a technical-normative function and is in charge of the general administration of the program. It organises the purchasing of food by public bidding and delivers the norms and rules of the program. The regional or provincial Education Director is the immediate authority. The Regional Nutrition Unit, comprising several school nutrition inspectors, organises in co-ordination with the pedagogical supervisors, the reception and distribution of the food. They supervise the timely food delivery to the distribution centres⁶, as well as the correct preparation and distribution of food within the schools (Yangüez, 1999).

Source and use of food

Food (milk, enriched *crema* and cookies) is purchased with the Investment funds of the Ministry of Education, by means of public bidding (*licitaciones públicas*). Food providers are usually regional and, therefore, serve their own region. Public biddings are carried out annually before the beginning of the school year, and providers are allocated separately for each product. Providers are responsible for the delivery of the products to the

⁵ Ley 35, 16 julio 1995: "Por la cual se establece el Programa de Distribución del Vaso de Leche y la Galleta Nutricional o Cremas enriquecidas, en todos los centros oficiales de educación preescolar y primaria del país".

⁶ Distributions centres are schools with a good road access, that have a relative central position to several satellite schools. Most of the transport is by road. In Bocas del Toro, Darién and San Blas is maritime.

distribution centres on previously agreed dates, locations and frequency. Law 35 states that food providers must be national producers, with the exception of those ingredients that are not produced in the country. This program does not provide other materials.

As milk does not need any preparation, it is provided to schools with a high number of students. Fresh milk is distributed daily in urban schools and once it arrives in the school it has to be given to children immediately. “Long life” (UHT) milk is distributed to rural areas once a month. Students should receive 8oz milk a day. This milk has been enriched with Vitamin A and D. The nutritional value of 8oz milk is 159 calories and 8.1g protein (MINEDUC, 1996). The proportion of required nutritional inputs which are approximately covered by each component is presented in table 2.

Cookies also do not need any preparation. They come in one-portion packets and are distributed to children receiving milk or *crema*. Enriched cookies are made of a vegetable mixture and contain Iron and vitamin A. A portion (12 small cookies) weighs 34g and represents 150 calories and 2.2g protein. Students should receive one portion a day (Yangüez, 1999).

Crema is provided on a monthly basis to smaller schools and this needs to be prepared before serving. It is made of corn, rice, sorghum, legumes or soy flour and contains 10 vitamins and minerals. Students should receive 8oz of *crema* a day. The nutritional value of 8oz is 193 calories and 4.9g protein (MINEDUC, 1996).

Table 2: Proportion of daily nutritional input required by children covered by each component, according to age

Product	Calories	Covered proportion according to age (in years)						
		5-7	8-10	11-12	Protein	5-7	8-10	11-12
Milk 8oz	159	9%	8%	7%	8.1g	30%	22%	17%
<i>Crema</i> 8oz	193	12%	10%	9%	4.9g	18%	14%	10%
Cookies 34g	150	9%	8%	7%	2.2g	8%	6%	5%

Source: MINEDUC 1996.

According to the National Director the budget does not cover all the school year (200 days), but extends only for about 140-160 days (70%-80% of school days) with milk or *crema* and 100 days (three times a week; 50% of school days) with enriched cookies. No precise data were available.

Participation requirements

Each school incorporated to the program is required to create a Snack Committee, which is integrated by parents and teachers. If there is a Household Education teacher in the school they will co-ordinate the committee. It is the responsibility of every teacher to collaborate with the program (MINEDUC, 1996).

The teacher in charge is required to keep records of reception and daily use of the products, and in the organisation of the parents (MINEDUC, 1996).

Mothers rotate to prepare the *crema* and in cleaning the cooking area. Parents are responsible for collecting the products or organising and paying for the transport from distribution centres, and in bringing fuel (kerosene or wood) for cooking (MINEDUC, 1996). They also maintain and build, where there is none available, the cooking area.

Cost data

The program funds are administered through the UNDP Mobilisation of Priority Investments Project which allocates 3% of the budget to administration costs⁷. Circa US\$ 9 million, was invested in food purchasing in 1999 (MINEDUC, 1999b,c). Costs of training, planning and supervision and administration are not included in this amount. The cost of food delivery to schools or distribution centres is included in the unit cost. Therefore, the cost per unit of milk (8oz) varies slightly according to the location to where it has to be delivered (Long life milk: US\$0.24-0.27; fresh milk: US\$0.19-0.21), as it is delivered by different regional providers. This is not the case for the *crema* and cookies as there is only a national provider for each. According to the National Director in 1999, *crema* and milk has been purchased for approximately 140 school days and cookies for 100 school days. The cost per unit was calculated on the information provided (table 3). Cost per unit differs, particularly for cookies, from other sources consulted (table 4), therefore, these data should be treated only as an orientation.

Table 3: Cost and beneficiaries of the Snack program in 1999 school year

	No. of beneficiaries ¹	Total cost ¹	Cost per ration	Cost per child per year	Cost per child in a full year ^c
Milk	135,400	US\$4,229,501	US\$0.22 (8oz) ^a	US\$30.8 ^a	US\$44
Cookies	236,139	US\$1,208,916	US\$0.05 (34g) ^b	US\$8.0 ^b	US\$10
<i>Crema</i>	237,046	US\$3,162,341	US\$0.09 (8oz) ^a	US\$12.6 ^a	US\$18
Total	372,446 ^d	US\$8,600,758			

^a 140 days

^b 100 days

^c Author's calculation based on 200 days

^d Cookies beneficiaries are not included in the total as they are already included under milk or *crema*

Source: MINEDUC, 1999

⁷ Information provided by R. Yangüez.

Table 4: Cost of Snack program according to several sources

	Cost per ration			Cost per child per year		
	Milk	Cookies	Crema	Milk	Cookies	Crema
	(80z)	(34g)	(8oz)	(80z)	(34g)	(8oz)
INCAP report 1998*	0.21	0.07	0.9	35.05	11.95	13.99
Lindert 1998	0.21	0.13	0.09	-	-	-
Yangüez 1999**	0.22	0.10	0.11	35.20	16.00	17.20

*Including calculations of supervision and administration costs

** Based on 160 days a year

Staffing arrangements

The School Nutrition program is organised at several levels (MINEDUC, 1996; Yangüez, 1999):

The **National School Nutrition and Health Department**, based in Panama City, encompasses three Departments: Food and Nutrition, School Health and Food Production with their co-ordinators.

At **regional level**, the person in charge of the program is the Regional Education Director. Each region has a Nutrition Unit comprising of several nutrition inspectors, with one co-ordinator. An inspector is in charge of about 80 schools and the number of nutrition inspectors varies according to the number of schools in the region⁸.

At **local level** the person responsible for the program is the School Director. As previously mentioned, teachers and parents are involved in the reception, storage, preparation and distribution of food to the children

Monitoring and evaluation mechanisms

The distribution of food to schools is monitored by means of receipts. Only authorised people are entitled to receive the products and it is usually the director or another designated person (no more than 2-3 people in each school). A copy of the receipt remains in the school, and two other copies go to the Regional Education Department and the National Department of School Health and Nutrition (MINEDUC, 1996).

The school keeps a daily record of reception and consumption of milk and consumption of cookies and *crema* that will be included in the monthly report. This report is required to be signed by the School Director and the President of Parents Association (MINEDUC, 1996). A copy of the report stays in the school and the original report is sent to the National Department of School Health and Nutrition.

⁸ Panama is divided in 10 regions (provincias)

The regional nutrition inspectors supervise the delivery of food to schools and they also supervise the preparation and distribution of the food in the schools. They work in coordination with the pedagogical inspectors (supervisores de zona escolar) (Yangüez, 1999).

No evaluation of impact has yet been carried out. An evaluation of the process was conducted in 1998 by the Nutrition Institute of Central America and Panama (INCAP).

1.1.1 Strengths of the Snack program

The program is one that has been implemented by law and, hence, the Government ensures its funding and its sustainability.

The program employs a nutritious combination of foods that has been tested, is easy to manage and prepare, and is also of low cost.

Milk and cookies are easy to distribute to children and it is less time consuming than *crema* because of the preparation required. They are, therefore, provided to schools with a higher number of students. *Crema* is easy to transport in larger quantities to rural areas and areas with difficult access. All products are timely and regularly delivered in 70% of schools (INCAP, 1998).

The purchasing system is transparent, agile and simple. Products are normally available on the first school day.

Children like eating the *crema* and cookies. They usually eat all they are given and will even eat more if it is offered. According to INCAP's report (1998), 90% of the children enjoy all three products.

1.1.2 Weaknesses of the Snack program

Delivery of products to some schools or distribution centres is slow. One of the visited schools was not informed of the arrival of *crema* to the distribution centre. Delays in information were also mentioned in the INCAP's report (1998).

Delays in delivery mean that children will not be able to eat snack over several days, or that they will receive diluted *crema*, in order to extend the quantities. In one school the teacher mentioned that the amount of *crema* was insufficient and it never lasted to the end of the month. The INCAP evaluation found a high variability in the composition of the prepared *crema*.

The preparation of *crema* also suffers from the poor hygiene conditions that are common in schools of rural areas.

A higher frequency of delivery means a higher cost because of transportation costs. Therefore, the cost of delivering milk is higher than delivering *crema*.

The products are purchased once a year on the basis of an estimation of the number of registered students. As a consequence schools may be supplied with excessive or insufficient quantities which contributes to inefficiencies in the program.

According to the National Director, the budget is almost exclusively for food purchasing. However, this hinders the strengthening of other components such as supervision, training, equipment, etc. In addition the budget is insufficient to cover all the caloric needs that it is meant to cover. Supervision to schools is also irregular.

The Snack program target is meant to cover 180 school days. However, the maximum it covers is 160 days and, for 1999, milk and *crema* will cover 140 days and cookies, will cover only 100 days.

Some children do not like some flavours of the *crema* (such as strawberry), but they are forced to eat it. In some schools, teachers mentioned that snack was monotonous and that it could be varied, such as alternating milk and *crema*.

1.2 Programa de Jornada Extendida: Long school days program⁹

The Modernisation of Education process includes the “long school days”, which aims at increasing the academic content of the school curricula. Schools participating in the program receive extra funds in order to provide lunch to their students.

The objective is to provide lunch to students in order to allow them to stay longer hours at school and thereby promote school attendance.

The target is to reach 534 schools in poor areas. About 100 of these schools seem not to be directly covered by this program but through the FES program. Data on the selection criteria and exact number of schools covered were not provided.

This program works in close collaboration with the FES Lunch program in order to avoid any duplication of efforts.

The program started in 1998, with a budget of USUS\$1.8 million (MINEDUC, 1999a).

This program also requires an important involvement of parents and teachers. The President of the Parents Association receives a cheque every month and this money is used to purchase food. The school director is required to supervise the use of funds. The President of the Parents Association keeps a daily record of what is used and the School Director also has a copy of the record. They are required to send monthly reports to the Ministry of Education in order to get the next cheque.

Mothers have a rota to cook and clean the cooking area. A teacher is in charge to organise the mothers and also supervise the menu. Parents contribute fuel (wood or kerosene), vegetables and labour, as in the other programs.

1.2.1 Strengths and weaknesses of the program

Schools visited that benefited from the program seemed to manage it well. One received a cheque every month and the other received a cheque every two months. Schools are required to submit reports a week before the end of the period in order to receive the next cheque on time.

Menus were very varied and there was a good co-ordination between teachers and parents in the purchase and preparation of food. An advantage is that food is locally purchased, and this saves on the costs of transport and stimulates local development.

A potential risk is delay in delivering the cheques.

A problem found in isolated schools is the lack of a refrigerator, which impedes the storage of perishable food. This may become a burden as it represents extra, daily work.

⁹ Data provided on this program were limited.

2. The FES Lunch program¹⁰

The FES Lunch program intends to provide lunch five days a week to all students in selected schools. The program provides rice, beans and oil and parents are expected to provide the necessary vegetables and spices to prepare them (Dirección de Planificación, 1995).

Objectives

General objectives

- To improve nutritional conditions and decrease morbidity and mortality among school children.
- To increase the educational level in the areas of project influence.

Specific objectives

- To provide a food complement of not less than 20% of the daily recommended calories and protein intake for children aged between 6 and 12 years.
- To increase the number of children registered at school.
- To decrease the number of school drop out.
- To contribute to decrease illiteracy.
- To promote community organisation.
- To promote the development of family and school gardens.

Target population and coverage

The program is targeted to the poorest districts with a higher level of chronic malnutrition that are also rural and indigenous areas. The initial selection of districts was based on the Third National Height Census, and later, selection to increase the coverage of the program was based on a priority ranking of districts proposed by the Social Emergency Fund (FES). In the last increase in coverage the poorest districts were selected on the basis of the Living Standard Measurement Study Survey. The sub-districts were then selected using a combination of the poverty index of the Basic Education Project and the Fourth National Height Census for school children (FES/Programa Nacional de Nutrición Escolar, 1997; 1999a).

Program history

The program started in 1991 with funds donated by AID and served 513 schools in the most poorest and isolated areas of 11 districts, which were not covered by other Ministry of Education programs. From 1992 Government funds were included in the FES (Social Emergency Fund) budget in order to continue with the program. Lunch was

¹⁰ This chapter has been elaborated on the basis of reports and statistics provided by the Nutrition Department of FES and interviews to the National Co-ordinator of the program (Lic. Ana de Espinosa), School Directors, parents and teachers.

provided for four months a year (80 lunches) (Dirección de Planificación, 1995). From 1995 to 1997 the coverage of the program increased to 1,045 schools in 25 districts¹¹. In 1998 the program continued to expand, and incorporated 3 more districts¹². In 1998, 70% of the funds were provided by a World Bank loan, through the Social Emergency Fund. The target for 1999 is to increase the program to 1,543 schools in 41 districts and provide 180 lunches per child a year. The funds provided by the World Bank loan in 1999 constitute 50% of the budget, and the intention is to decrease them progressively until the program becomes fully financed by Government funds (table 5) (Programa Nacional de Nutrición Escolar, 1998; FES/Programa Nacional de Nutrición Escolar 1999c).

Table 5: Evolution of the FES lunch program

	1994	1995-1997	1998	1999 (Target)
Coverage				
Districts	11	25	28	41
Schools	513	1,045	1,220	1,543
Beneficiaries	44,000	80,000	91,300	118,300
Deliveries	2	12	2	4
Lunch/child/year*	80	120/160/120	120	180
Investment US\$ Millions	0.2	2.5	1.28	1.58
Source of funds	Central Government	Central Government	Central Government/ World Bank (30/70)	Central Government/ World Bank (50/50)

* Only for children in the program from the beginning of the year

Source: Programa Nacional de Nutrición Escolar, 1998 and statistics provided by the National Co-ordinator of the program

Responsibilities and institutional links

The implementation of the program succeeds with the support of different Government sectors, thus, the program functions through the Inter-institutional Co-ordination Department of the Social Emergency Fund. The Nutrition Department is in charge of the program.

Different institutions with various roles are also involved (FES/Programa Nacional de Nutrición Escolar, 1997):

¹¹ The actual number of lunches that every child received from 1996 to 1997 varied according the time of the year when the school entered the program. Thus, the difference between the number of lunches/child and average lunches/child in tables 3 and 4.

¹² It was not possible to establish the number and exact districts incorporated each year as data varies in the different reports and statistics consulted.

- **Normative level.** First Lady's Bureau at the Ministry of Presidency participates in the elaboration of norms and procedures to ensure that the resources go to those that need it most.
- **Administrative level.** FES at the Ministry of Presidency manages and administers the resources, due to its agility in contracting and purchasing of food.
- **Technical assistance.** The Ministry of Economy and Finance collaborates in the purchasing of materials and facilitates international technical assistance.
- **Operational level and supervision.** The national and regional levels of the Ministry of Education contribute the necessary information, verify food delivery and supervise the use of food in the schools. At local level teachers administer the program and organise the participation of parents.
- **Technical evaluation and fiscal control.** The process of purchasing and delivery of food is audited by the Contraloría General de la República (Office of the General Comptroller of the Republic).

Source and use of food and other materials

Food is purchased by means of public bidding. The public bidding takes place three times a year and may be conducted separately for each of the items (rice, beans and oil) and regions. National and foreign providers are allowed to compete.

The food quantities needed are calculated on the basis of the actual number of students who are registered at school. Therefore, there is more than one bidding a year in order to adjust quantities. Providers are also in charge of distribution to schools or distribution centres (Dirección de planificación, 1995; FES/Programa Nacional de Nutrición Escolar, 1997).

Rice, beans and oil are used to prepare lunch to all children at the schools benefiting from the program. Parents bring vegetables, spices and when possible other food to complement the lunch.

The program does not provide any other materials.

Participation requirements

The program has formulated the following participation requirements for schools (FES/Programa Nacional de Nutrición Escolar, 1999d):

- Schools designated as distribution centres are required to provide space, normally a classroom, to store the food several days until the satellite schools collect it.
- Teachers are required to contribute their time in order to administer the use of food, and also organise the participation of parents.

- Parents have to transport the food from the distribution centres or organise and pay for the transportation¹³.
- Mothers organise a rota to prepare the food and clean the cooking area.
- Parents also provide fuel (wood or kerosene) for cooking, vegetables and other food to prepare the lunch.
- Schools cultivate a school garden and its produce are used in the lunch.

Cost data

Cost data are not separated by items. According to the National Co-ordinator of the program, FES charges 3% overhead and costs of distribution to schools or distribution centres are included in the cost of food. Parents bear the cost of transport from distribution centres to schools, as well as in the preparation of food¹⁴. From the budget approximately 8 to 10% is estimated to be administration costs. These include salaries, per diem, transport and supervision of isolated areas. The cost per lunch was US\$0.117 in 1998 (FES/Programa Nacional de Nutrición Escolar, 1999e). The cost has slightly decreased over the years, yet the program has increased in coverage (table 6).

Table 6: Evolution of costs of FES Lunch program

	1994	1995	1996	1997	1998
Investment		US\$580,000	US\$915,000	US\$985,728	US\$1,280,00
Food and transport	US\$420,026	US\$522,000	US\$837,066	US\$901,728	0
Administration costs		US\$58,000	US\$77,934	US\$84,000	US\$1,167,245
					US\$112,755
Beneficiaries	43878	45,587	50,756	78,780 ^a	91,300
Average lunch/child ^b	80	98	148	96	120
Cost per lunch ^c	US\$0.119	US\$0.13	US\$0.12	US\$0.121	US\$0.117
Cost per child/year ^d	US\$9.57	US\$12.89	US\$19.49	US\$19.21	US\$14.01

^a The number of registered children changed over the year

^b Author's calculations based on data provided by FES lunch program

^c Total investment/total number of lunches provided

^d Total investment/total number of beneficiaries

Source: FES/Programa Nacional de Nutrición Escolar 1999e

Staffing arrangements

Initially the program appointed only the National Co-ordinator, however, two other staff members have recently been employed: an administrative assistant and a training and supervision technical assistant.

¹³ Helicopters do not deliver the food any more to isolated areas as it proved to be irregular and inefficient.

¹⁴ The project co-ordination has made an attempt to calculate the monetary value of schools and parents contribution to the program. With this aim, questionnaires were distributed to schools. The results have not yet been analysed.

Supervision of the program takes place in co-ordination with the Ministry of Education. Its nutrition inspectors also contribute to the supervision of food distribution and preparation. Regional delegates of FES also collaborate in the supervision.

At school level the school director or another designated person is responsible for the program.

Monitoring mechanisms

The central team with the help of regional delegates of FES and School Nutrition Inspectors, verifies the delivery of food to schools and distribution centres. A delegate of the Ministry of Education and of the General Comptroller of the Republic also takes part in this procedure.

When food is delivered to schools or distribution centres, the person in charge of the program (the director or a designated teacher), is required to sign a receipt. A copy of this receipt stays in the school and a copy is sent to the Regional Nutrition Inspector who collects the receipts and sends them to the national level.

The person in charge of the program at school level keeps daily records of food consumption on a provided form. They also have to prepare delivery reports on a provided form three times a year. Both reports are sent to the Regional Inspector of Nutrition and a copy stays at the school for supervision purposes.

There are also supervision plans and forms. However supervision takes place on an irregular basis, due to the size of the program and the reduced number of staff. The supervision takes place in co-ordination with the nutrition inspectors.

The Internal Audit Department of the FES periodically carries out internal audits of the program, in order to verify the use of funds and correctness of the procedure. These reports have particularly helped to adjust the quantities of food to school needs and in improving the purchasing procedures.

No process or impact evaluation of the program has taken place.

2.1 Strengths of the FES Lunch program

Food is generally distributed in a timely manner and is regularly prepared.

The program administration is relatively simple and transparent.

Teachers' and parents' participation is high, and both show a high degree of commitment to the program.

There is good co-ordination with the Ministry of Education at national, regional and local levels. This gives the advantage of lower cost, as the program does not have its own supervisors.

2.2 Weakness of the FES lunch program

Some of the schools in greatest need are in rural areas which are very isolated and scattered. This makes food delivery difficult and also, perhaps, inefficient.

The process of food purchasing is sometimes very slow, and this results in an interruption of lunches at school level. Payment to providers takes place long after the food delivery, and this can produce a lack of interest from the providers.¹⁵

In a few schools, less than 5% according to FES reports (Programa Nacional de Nutrición Escolar, 1998), food is prepared on an irregular basis, mainly due to teachers' absenteeism (they may arrive on Tuesday and leave on Thursday) or lack of parents' support. Food may, therefore, remain unused at the end of the school year.

Food distribution in 15% of the communities is slow. There is also a delay in the collection of food by satellite schools from the distribution centres (Programa Nacional de Nutrición Escolar, 1998).

Supervision takes place on an irregular basis and there is a risk of late detection of potential problems.

¹⁵ For the second semester of 1998, the public bidding took place on 12 February. Results of the bidding were published on 18 March and contracts were finished by 18 July. Food delivery took place in April, but providers only received their payments at the end of July or August.

3. Aspects concerning all feeding programs

3.1 Contributions of the programs

In addition to answering a normative need, feeding programs answer a strongly felt need as was shown by all interviewees' declarations. None of them thought that having more than one program was a problem and they expressed and showed their commitment to working on the programs. They found it necessary to have two programs (snack and lunch) because children spend many hours at school. Moreover, in schools where there was only the snack program parents and teachers undertook all possible activities to offer lunch to children at least once or twice a week. From time to time, in many of the schools, parents and teachers would develop fund raising activities in order to complement or vary the menu.

According to teachers and parents some of the children belong to very poor families and come to school without having eaten breakfast. The food provided at school is an important source of nutrition for the children and contributes to an improvement in their diet. They also found this to be particularly important for children who had a long walk to the school. It also has the advantage of helping their parents economically.

Some teachers mentioned that feeding programs had contributed in improving school attendance and students performance, which led to a decrease in the number of school drop out. They also mentioned that the number of registered children has increased. It was also noticed that the children had more energy ("le da ánimo a los niños") to participate in class.

The involvement of parents in the distribution and preparation of food was mentioned as a positive aspect by teachers. "Parents become very enthusiastic and collaborate with it. If they have little children at home they are allowed to bring them or to send a replacement".

3.2 Difficulties in program implementation

Some schools were found to have problems with water. In one school mothers had to walk half an hour to bring the water. This is not unusual in rural isolated areas.

Cooking facilities in some schools were very limited. Space was reduced and the cooker was insufficient. In one of the schools the fire space was too big and the women had difficulty in moving the pots. Many schools did not have a dining room and children had to eat in the classroom.

Some schools did not have storeroom and had to leave the food in the classroom. Some schools were very secure and safe, but others had suffered from burglaries in the past.

Parents were expected to be heavily involved in the programs. In a few cases it was mentioned that some mothers did not want to cook and so had to be replaced. Some did not either want to pay a replacement in the case of absence. Some did not have the money to pay for a replacement and this could be perceived as shameful. Some husbands would not allow their wives to cook at school and, in these cases, parents may take the child away from the school in order to avoid the situation. Sometimes it was not possible to replace the mother and if this happened no food was offered. This also meant some extra work for teachers as they have to organise the mothers. Schools in urban areas are less likely to involve parents, as they usually work outside their homes and do not have time. In addition, in urban areas, the feeling of belonging to a community is less likely.

Another problem mentioned by both teachers and parents, was the monotony of the menu, as students can receive exactly the same menu every day for months.

The interruption of the program during vacation time was considered to be a weakness by one of the teachers.

The distribution centres for some schools were perceived to be too far away and they suggested a nearer place. However, according to the National Co-ordinator of the program, the companies delivering the products are not prepared to go to some places due to the very poor conditions of the roads.

3.3 School environment

This section provides information on aspects relating to the school environment such as, teachers, parents and students participation in the feeding programs; data collected at school level; other sources of food and school health programs.

3.3.1 Parents, teachers and students participation

Parents, teachers, school directors and, in a few cases, the children themselves, are involved in the program.

Teachers are required to receive the food, keep the records, organise and also give instructions to the mothers.

Mothers have to prepare and distribute the food every day and they rotate in this role according to a calendar prepared by the teacher in charge. They can dedicate many hours to this role. They usually stay at school from 6:50 to 13:30, except in very small schools with only *crema* program. In addition, they may have a long walk to the school.

In cases where mothers are not able to come on the day they are on duty, they have to pay a fine to re-allocate their work (from US\$ 1-3, depending on the school). The number

of mothers coming every day depends on the size of the school. The largest of the schools visited had 10 mothers cooking every day. In some schools mothers are organised in Mothers' or Housewives' Committees, whilst in other schools they answer to the call of the teacher in charge of the program. If schools have manual workers, they may be required to prepare the snack.

Parents are organised by the Parents Association. They will contribute wood or kerosene for the cooking, and they are also responsible for building and repairing the kitchen. In the cases where food is brought to the distribution centres, the parents will collect the food or organise and pay for the transport to the school. Parents also do the hard work in tending the school garden.

Parents pay a small contribution at the beginning of the year to the Parents Association fund, and this fund will be used to cover several needs at the school, including food complements for students.

In most of the schools, fund raising activities are organised, such as raffles, parties ("mañanitas criollas"), film shows, etc. Amongst other things, the raised money is used to complement and vary the menu. However, the frequency of these activities is irregular and differs from school to school.

In some larger schools, students help by bringing the food from the storeroom to the kitchen.

The level of organisation and parents involvement seemed to be related to the commitment of the teachers to school which, overall, was found to be very high.

3.3.2 Information collected by school

Every year the school registers every child for name, sex, age, academic data and height and weight at the beginning and at the end of the course. Height and weight of the children can be measured, depending on the school, at the health centre/post by a health team visiting the school, or by the teachers. This information is sent to the Unit of Statistics at the Regional Education Department on an irregular basis and the quality of the data is poor.

Yearly data on school performance remain at school level (Informe medio), and students receive marks on their performance every two months. These are given to their parents as academic performance reports. Only data at the end of each cycle (Primary school, Secondary school) are sent to the regional level. Data on school drop out and performance are available for the whole country.

3.3.3 Other sources of food

With a few exceptions, because of problems with space or water, most of the schools have a school garden. These can be different sizes and are kept in various conditions. The gardens are mainly used with pedagogical purposes, and children work in the gardens once a week. They have one harvest a year and produce a food complement for a short period of time. Each school produces different vegetables, such as cucumber, corn, manioc roots, tomato, pepper, etc. Parents do the hard work in tending the garden. In one school the garden belonged solely to one class.

In all schools visited that had not got a lunch sought other sources, such as the municipality or Christian missions, or they arranged fund raising, in order to be able to offer lunch to the children at least once or twice a week.

In most of the schools there are also sporadic donations by members of the community, the Ministry of Agricultural Development, etc.

First Lady's Bureau and the Ministry of Agricultural Development support projects to raise chickens at school, which should become a self-feeding investment. Schools take care of these chickens, and can then sell some of them and eat others. Some of the schools we visited had chickens, but they had eaten too many to keep the fund going. Others, on the contrary, said their chickens were second generation.

3.3.4 School health programs

Some schools were benefiting from the School Health program. Those schools receive visits from health teams that, according to the informants, take place on an irregular basis. During these visits children are weighed and measured, screened for eyesight and hearing impairments and their vaccination status is supervised. They may also receive deworming treatment. Children suffering from a medical condition are referred to the health centre.

Schools that are not in the School Health program also receive visits from the health team on an irregular basis, sometimes answering a request from the school. In those cases screenings seemed to be less complete.

Some of the larger schools have a health committee in charge of the monitoring of school hygiene conditions and may organise the visits from the health post. They may also have parents involved in the committee. In one of the schools, the school director mentioned that children were receiving Iron supplement.

4. Conclusions

School children in Panama are currently benefiting from feeding programs that serve a good proportion of the school population as well as answering a normative and felt need. However, none of the programs seem to be able to offer food every school day. In addition to these programs, parents and teachers look for other sources to complement the food, including from several other small programs.

Cost data other than food costs were not available. There is no investment in school infrastructure and little investment in supervision and other complementary activities. These costs are however not quantified.

Parents and teachers' contributions to the programs were found to be high. There was an attempt to measure supervision and administration costs of the Snack program and a partial estimation for the FES Lunch program. The parents' contributions have not yet been quantified for any program.

Data on the height and weight of children at school level are collected and kept in different ways and, therefore, may not be comparable.

The evaluation will have to consider ways to establish the actual school food intake of children, as many of the schools which are not benefiting from the two largest lunch programs may have other sources of regular food provision.

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ANNEX

Terms of Reference
Baseline Evaluation School Feeding Program
Panama
April 22, 1999
REVISED – May 27, 1999

Background and objectives

1. School children in Panama currently benefit from two national school-feeding programs: an early-morning snack sponsored by the Ministry of Education and a school lunch program supported by the Bank-financed Social Fund (FES). The FES program appears to function well and reach the targeted population, according to the recent LSMS results, supervision reports and monitoring data.
2. FES and the World Bank are launching an impact evaluation to examine the effect of Panama's school feeding programs on school attendance, educational performance and nutritional status. The evaluation will also provide information on the children's learning environment to better understand the relationship between nutrition, school inputs and learning and to hold constant for school-level characteristics in the analysis – an element that has been identified as important, and often absent, in the literature on school feeding programs. The evaluation will also contain a cost study, with an eye toward assessing the relative cost-effectiveness of the two school feeding programs.
3. The objective of the baseline evaluation is to establish baseline data on school children for the impact-analysis of Panama's feeding programs and to carry out an updated situational assessment of the school environment where the program operates. The baseline evaluation is the first step in a more comprehensive evaluation that will be carried out over 2 years. The baseline evaluation will also serve as an opportunity pilot the methodology that would be used in the larger scale impact-evaluation. The final evaluation will include (i) using the 2001 Living Standards Measurement Study's household survey to follow-up on the cohort of students first surveyed in the baseline, and control for household characteristics in assessing the outcomes of the school feeding program; and (ii) collecting a second round of school data.
4. The terms of reference for the baseline evaluation are divided in 3 phases. The first, area and school identification, will be carried out by the nutrition coordination unit of the FES; the second, a detailed situation analysis by the Partnership Consultant, paid through Spanish Trust Funds; and the third would be the actual baseline evaluation which would be contracted out to a regional consulting firm. Peer reviewers terms of reference will be included at a later stage.

Detailed task description

Phase 1: **Nutrition Coordination Unit.**

The coordination unit of the FES will participate fully in the evaluation, beginning with collecting some initial information. Specifically, the FES Nutrition Coordination Unit should:

a) Prepare the necessary data to determine the scope of the groups to study, the areas to target and other basic information on the schools to be included in the evaluation. More specifically the unit will:

- determining how many primary schools fall under the following program beneficiary categories:
 - 1) MINEDUC and FES
 - 2) MINEDUC Snack only
 - 3) FES Lunch only
 - 4) Neither
- where the schools in each of these four categories are located geographically, preferably by municipality and with urban-rural classifications;
- what primary school enrollment levels are in each school;
- what kind of school each is (public, private, private subsidized, private religious, etc.);
- the number of feeding program beneficiaries per school, by type of program, when applicable
- a list of what other school-level information is available, in what format and where to find it

The information will be provided in an Excel or Excel-compatible database of the universe of primary schools, classified according to which category of beneficiary they belong to (1 to 4); which municipality they are in (with the municipalities coded according to Poverty Map classifications); what kind of school each is; what enrollment levels are in each school; and the number of feeding program beneficiaries. This information will be used by the regional firm to select the sample for the baseline evaluation.

b) Obtain information on research firms, NGO's and government agencies that have done quantitative research on early childhood development, school feeding, and/or social sector program evaluation in Panama. This list should include the names, addresses and phone numbers of the institutions; the names, professional background and contacts of key staff; and a description of research strategies (e.g. household surveys, market research with focus groups, etc.), research areas and publications.

c) Obtain the most recent Panama height census of school children in database format, with the accompanying data dictionary. A description what historical data are available from the height census (e.g. which years it was applied and what information it contains) should also be prepared. The consultant should also coordinate with FES to identify issues concerning the compatibility between the height census and the school-level data being prepared by FES.

Phase 2: **Partnership Consultant:**

The purpose of the consultancy is to conduct a detailed situational assessment of the four groups that have been identified to be studied: school with both FES Lunch Program and the MINEDUC Snack Program (Group 1); schools with either one of the programs (Groups 2 and 3); and schools with no program at all (Group 4).

a) The consultant will write a detailed, but concise program description of the two programs, including*:

- the project objectives;
- target population(s) and coverage;
- program history, including initiation dates and expansion into specific geographical areas and/or populations;
- responsibilities and institutional links;
- source and use of food and other material;
- participation requirements from students, schools, communities and others;
- cost data, including breakdowns by unit cost, overhead, investment and recurring cost;
- staffing arrangements;
- monitoring and evaluation mechanisms; and
- impact evaluation reports, with titles, references, and if possible, copies

*most of this information will be obtained from the nutrition coordination unit of FES, and the equivalent office in the Ministry of Education

b) The consultant should carry out some field visits to schools in groups 1-4 above (or at least groups 1-3) to conduct some assessments of the schools and nutrition program(s) in the schools, and include the results as part of the program description report. Prior to conducting the field visits, it is recommended that the consultant develop a short list of subjects/questions to be covered in each site visit along with a concise strategy for how the information will be obtained for review with the FES and World Bank for comments.

Phase 3: **Regional Consulting Firm.**

The regional consulting firm would select the sample, design the data collection instruments, collect the baseline data from schools and children enrolled in the sample of schools in the identified areas, analyze the data and prepare a report. Specific terms of reference for the regional consulting firm will be developed by the World Bank in

collaboration with FES as the product of a mission to be carried out in or around June 1999, drawing upon the Partnership Consultant's report.

Estimated Time Frame – Baseline Evaluation

June 1999: FES preparation of data
Partnership Consultant mission to Panama

July 1999: Submission of Research Proposal to World Bank Research
Committee
World Bank Mission to Panama – finalization of TOR for regional firm
Request for proposals from regional firms for baseline evaluation
Partnership Consultant report

August 1999: Select regional firm
Sample selection
Data collection instrument development

September 1999: Pilot test

Oct. –Nov. 1999: Fieldwork

Dec. – Jan. '00: Data processing

Feb. '00: Draft report

March '00: Final report

List of Contacts for Terms of Reference

Ana de Espinoza Coordinator School feeding program F.E.S." <fespma@sinfo.net
FES, Panama
Tel: (507) 212 2974

Kathy Lindert* Task Manager, FES, World Bank klindert@worldbank.org
(202) 473-6306 *out until June '99

Willem Struben Acting Task Manager, FES, World Bank
wstruben@worldbank.org
(202) 458-2532

Claudia Rokx Nutrition Specialist, World Bank crokx@worldbank.org
(202) 473-3619

Laura Rawlings Evaluation Specialist, World Bank
lrawlings@worldbank.org
(202) 473-1274

Victoria Valdez Resource person in Panama
Coordinator MINEDUC-evaluation, 1997
INCAP/WHO

Issues to be explored during the field visits to schools

1. Relating to SCHOOL ENVIRONMENT

(factors that may influence the impact of the program)

- Participation of parents, teacher: nature and organization
- Role of the children, if any
- Any other nutrition related activities, e.g.:
 - other sources of supplementary food (church, NGOs, etc.)
 - school gardens
 - parents bringing food
 - funds raising activities, etc.

- Information collected on children:

Type of data, how are they collected, since when, how often, by whom

2. Relating to PROGRAM IMPLEMENTATION

- Who is involved?
- What are their roles/responsibilities?
- How is it working:
 - strengths of the program (contributions)
 - problems in its implementation: logistics, personnel, bottlenecks, etc.
 - Suggestions for improvement: perceived impact
- Advantages/disadvantages of combining two programs
- Coverage of the nutrition programs (schools without nutrition program?)
- Costs of the programs

INFORMANTS

Persons in charge of the programs at national and local level

Parents

Teachers

Other personnel involved