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Notes

30 pp
The document outlines UNICEF's programme to promote breastfeeding in Brazil, and evaluates the current situatior in the country. Gives background on decline of breastfeeding in Brazil and related decline in child health; outlines objectives of UNICEF's campaign to promote breastfeeding; strategies; linkages with other UNICEF efforts; monitoring; choice of responsible agencies; plan of action (facilities for working women, modifying infant food industry, reorganizing existing services; budget; Government commitment; nutrition in metropolitan areas, in schools. Tables showing demographic statistics for the four quadrants of the country, relating to population, percentage/numbers of children, and dietary deficiencies.

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PROMOTION OF BREASTFEEDING

I. BACKGROUND

In Brazil, the decline in breastfeeding is creating the known and serious child health and infant mortality problems. Since it hits at a base point in public health, it also affects the yield from other quite heavy Brazilian investments in this area.

Apart form anything else, a lack of effective action here is a basic lack of action in the field of "preventive" programmes. Such programmes are more marked by their absence on the Brazilian public health scene and urgently need emphasis.

Studies compiled by the National Food and Nutrition Institute (INAN) bear out the widespread nature of the problem:

In the sixties, breastfeeding was universal and lasted up to anything from 4 to 12 months. But, by 1975, a Recife study showed weaning before the infant was 1 month old in 53% of the sample - and this in a year when the Infant Mortality Rate jumped 50% to 198.8 (per 1,000 live births) from 124.2 in 1966.

A study in the same city has shown that 73% of deaths in the first year are of infants breastfed for less than a month or not at all.

By 1978, the number of mothers ever breastfeeding in Pernambuco had dropped to 75% and those doing so for 4 weeks and more had plummeted to 12%. So much for the more economically backward

Northeast.

In the South and Southeast, the picture is no better. In Pelotas (Rio Grande do Sul), 73% of infants 2 months old were already on supplementary food. So were 50% of the infants leaving the maternity hospital in Campinas. In São Paulo a study found that 77% of infants 1 month old in the sample had already been weaned.

A study on the nutritional status of São Paulo children between 6 and 60 months of age by the institute of Economic Research and the institute of Preventive Medicine showed an association, statiscally significant, between breastfeeding and malnutrition in children 2 years old and younger. This is amply corroborated by the WHO study by Puffer and Serrano in 1973 of 13 Latin American projects, including São Paulo, Ribeirão Preto (both in the South) and Recife (Northeast).

The reasons for the sharp drop in breastfeeding here are : rapid urbanization (urban population 63% and growing); changes in structure of the family which make it less supportive of breast-feeding; industrialization and the changing status of women; a new feminine self-image bred by the mass media and the environment; the association of the bottle with modernity, convenience and the elite; endorsement of this by doctors; public health and hospital practice which misinform the mother, separate her from the infant for too long after birth and do not encourage breastfeeding in routines or lodgement.

Three other factors deserve notice. The laws of the land and their enforcement help provide no creches, suitable leave/time-off rules or job security for working mothers.

There is heavy infant food advertising and promotion, unchecked in some places even in hospitals.

Finally, there is a grievous lack of education and the right information, to counter the negatives; school, medical and nursing curricula ignore the advantages of breastfeeding; the mother is left in the dark or confused, especially by medical advice.

The psycho-social and anti-conceptional implications are serious. Breastfeeding practitioners and periods are declining despite a wide acceptance among mothers and doctors that "breast is best". There is a gap between claimed attitude and resulting behaviour. By far the most frequent reason given by mothers for early weaning is "insufficient/inadequate/weak/salty" milk. This response is indicative of the chain reaction really at work: hospital practices which effect the lactation reflexes in the mother-child dyad; unsatisfactory lactation; easy availability of well-promoted substitutes; medical and environmental endorsement. Most of this links up with the mother's pre-natal preparation. Even legislation does not really help her.

Taken together, these forces overwhelm her own positive views on breastfeeding. She acquiesces in artificial feeding. To harmonize behaviour with opinion, she comes up with rationalizations ("insufficient etc" milk) which are partly valid anyway: the milk flow does stop.

Economics, reflecting these realities, offer gloomy estimates of food loss. Considering that on an average a mother produces 500 ml of milk per day and that about 4.5 million infants are born each year we are talking in terms of about 400,000,000 litres of milk annually based on a conservative 6 month spell of nursing. Conserving even a part of it means a substantial saving in food loss.

This is substantial for a country which has reduction of its

foreign debt high on its list of national priorities. Some of the food loss certainly goes to swelling it.

In addition, the consumer prices of formula feeding can eat up some 30% of a low income family's budget with one child.. and/or mean insanitary dilution of the milk powder into lethal feeding of the infant.

II. OBJECTIVES

The principle objective is to increase breastfeeding since it has direct positive impact on the socio-economic situation in Brazil.

1. To improve the nutritional status of infants considering that only mothers milk contains all elements essential for overall growth and brain development which is so rapid during the first few weeks and months of life.

2. To improve the health since adequate breastfeeding provides anti-infectious agents which protect infants, especially during the neo-natal period when they are vulnerable to infections whose consequences may be disastrous.

3. To reduce morbidity and infant mortality since breastfeed infants are less prone to gastro-intestinal infections and protein-calorie malnutrition. Bottle feeding under unhygienic conditions during this critical period leads to serious gastro-intestinal infections.

4. To improve the psycho-social interaction with the mother associated with breastfeeding which is important for the psycho-affective future of the child.

5. To improve the financial situation of the economically disadvantaged family since mothers milk costs considerably less than artificial milk.

6. To improve the health of the mother and the born and unborn children by reducing the frequency of too closely spaced pregnancies. A number of studies have shown that population groups with a high proportion of breastfeeding also have longer spacing between births than those whose breastfeeding rate is low.

III. STRATEGIES

1. To launch a campaign to promote and advertise breastfeeding and inform and educate a variety of different audiences including policy makers, health professionals, paediatricians, teachers, school children, parents, teenagers, community workers and the public in general. Explore the use of all possible channels for conveying such information including radio and television networks, newspapers and magazines, public advertisements, health services and clinics, schools, community development activities, churches and workshops and seminars.

2. To re-structure the legal provisions to ensure adequate maternity leave, job security, uninterrupted financial income, facilities to breastfeed and creches on work premises for working mothers.

3. To institute appropriate legislative measures to ensure that infant food industry does not negatively influence breastfeeding.

4. To re-organize the existing health system to provide appropriate services and advise during pre-natal, maternity and post-natal periods.

5. To study the existing human and financial resources situations and make appropriate recommendations on the need for training, re-organization and additional requirements to implement the re-organization of the health system.

IV. CONVERGENCE AND LINKAGES

This project proposal concerning promotion of breastfeeding is a part of the total input from UNICEF in the field of nutrition which includes evaluation of infant and child feeding in Brazil, eradication of goitre and cretenism and a possible assistance to control and prevent hypovitaminosis A. Strictly speaking breastfeeding comes under the subject of infant and child feeding. However, a separate project proposal is submitted in view of the special nature of nutritional problems of infants of 0-6 months age group, and the special efforts that are required in educational, promotional, legal, health and other areas influencing breastfeeding to resolve the problems. On a project planning and implementation point of view it is considered easier by separating it from the more complicated issues relating to the wider field of child feeding.

The promotion of breastfeeding is closely linked to primary health care since the essential elements concerning health problems and measures to prevent them, maternal and child health care, family planning, control of infections and the promotion of adequate food supply and nutrition are closely inter-related elements in primary health care. Primary health care workers including traditional birth attendants and maternal and child health personnel, may be in the best position to support the mother by providing her with information on appropriate nutrition and infant feeding.

Extension workers from all sectors who are in contact with youth and mothers also have an important role to play in the promotion of breastfeeding. Certain amount of re-orientation, training and

supervision will be required to meet this demand.

Education and promotion of breastfeeding would involve the national educational system as well as national food and nutrition policies and programmes.

The recommendations of the WHO/UNICEF meeting in Geneva in October 1979, in which the Government of Brazil was represented, will be used as a guideline to formulate a co-ordinated plan of action for the breastfeeding project in Brazil.

V. MONITORING SYSTEM

Specific areas considering regional representation,urban/rural situations and critical problem pockets will be selected to gather baseline data on the situation of breastfeeding to monitor progress. The co-ordinating committee on breastfeeding in Brazil agreed that the questionaire to collect information should be kept as simple as possible to effectively include a large number of samples. A sample of the questionaire being considered by this committee is attached to this document.

A more complete and concise monitoring system will be worked out and incorporated in the detailed plan of action which will have to be prepared at a later date after the arrival of the project co-ordinator.

VI. ASSIGNMENT OF RESPONSIBILITY

The National Institute of Food and Nutrition (INAN) will have the overall responsibility of co-ordinating the planning, provision of human and financial resources, monitoring and implementation of the project. INAN is an istitution within the Ministry of Health.

The co-ordination committee formed by INAN has representatives from the Ministry of Health, Brazilian Society of Paediatricians, LBA, WHO and UNICEF. This committee will also include local Brazilian health and nutrition experts as and when the need arises.

WHO through their advisor in INAN will provide technical advice and guidance in the planning, implementation and monitoring of the project.

UNICEF would provide technical and financial input in the planning, implementation and monitoring of the project.

VII. PLAN OF ACTION

The principle areas that needs to be incorporated into a detailed work plan are those items listed in paragraph III "Strategies".

1. Promotional, advertising and educational campaign

A wide range of audience needs to be reached and in Brazil it is possible to use well established communications and news media institutions who are already motivated to improve the situation of the underprivileged children through their active involvement in the International Year of the Child campaign. Besides these well established channels of communications it is important to use the advertising and promotional techniques used by commercial enterprises to sell their products. These could include wides - pread advertising through magazines and newspapers; posters, pamphlets and booklets aimed at selected target groups; public advertising on billboards, buses, trains, etc.

Though some institutions would be prepared to participate free of costs the bulk of the promotional activities would need considerable financial inputs. Close collaboration with experts in

the field of communications, mass media, and advertising is crucial to:

- assist in identifying the different audience groups;
- design appropriate messages to establish the link between the message giver and the message recepient;
- select the channels of communications best suited for the different audience groups;
- monitor the impact of promotional activities and design the necessary changes required.

Educational aspects aimed at the public in general would be taken care of by the communications, mass media and advertising campaign. Schools, universities and other formal institutions like hospitals, clinics, health centers and different types of community groups would require the co-operation of Ministries of Education, Health and other governmental and non-governmental institutions.

2. Facilities for working women

A re-evaluation of the existing laws will be required to establish conditions for the working women to encourage breastfeeding. Certain suggestions have been made by the co-ordinating committee which needs to be taken up with appropriate authorities to effect a change in the legislation on questions related to maternity leave, availability of creche and facilities for breastfeeding, medical facilities, financial security of mother, etc.

The fact that a law exists does not necessarily mean that it will be implemented. A monitoring system will have to be established to identify the problems encountered in enforcing legal requirements.

3. Modification of infant food industry activities

Appropriate legislative measures needs to be taken to restrict advertising and sales promotion of infant feed and other products that are not suitable alone as weaning foods, prevent infant food industry negatively influencing mothers of new born children through the medical system and paediatricians.

Brazil like many other developing countries is faced with this problem and it is important to implement appropriate legislative measures.

4. Re-organization of existing services

A variety of actions necessary to restructure the existing systems that have a direct or indirect influence on breastfeeding needs to be looked into. Hospitals, clinics, maternity centres, paediatric institutions, health centres and community centres require proper orientation in terms of priority and additional human and financial inputs for adequate coverage on issues favouring breastfeeding.

Breastfeeding is directly related to preventive approach on health and nutritional problems.

There is a need to neutralize the practices and influences that discourage breastfeeding.

Time and opportunities should be created to educate mothers during their visits to these institutions.

A stock taking of manpower and financial resources will have to be done to understand the existing situation and plan a proper training and recruitment programme.

5. Training and development of human resources

Training and development of human resources

Training and development of human resources would apply to the professional category, policy makers, community leaders and voluntary workers and the training of trainees. The primary target group is health and medical personnel at all levels from community health workers up to doctors and paediatricians.

6. Co-ordination of existing information and activities

Isolated activities promoting breastfeeding are already taking place in Recife, São Paulo and the university of Campinas. There is an urgent need to co-ordinate these activities for wider application on a national scale.

VIII. REFERENCES

INAN Reports on breastfeeding meetings held in Brasilia in August and Curitiba in October 1979 and the references made in them about studies conducted in Brazil. These studies refer specifically to the situation in Brazil.

"Human Milk in Modern World" by Derrick and E.F. Patrice Jelliffe which gives an overall appreciation of the subject.

Other specific reference documents on specific studies in other countries would be selected to serve as guidelines.

IX. UNICEF ASSISTANCE

The major input from UNICEF will be to provide a consultant for a

period of two years. The consultant would be an advisor to INAN and UNICEF and his principle duty would be to assist in the co-ordination of the sectoral activities of the project.
The consultant should have a good knowledge on nutrition and health problems of children with sufficient experience in a managerial position.

The second major input from UNICEF would be to reimburse the initial cost of launching promotional, advertising and mass media campaigns.

UNICEF would also finance the cost for recruiting short term consultants on specific technical issues.

Expenditires (US$)

	1980	1981
1. Consultant for co-ordination of the project	50,000	52,000
2. Travel and per diem for consultant	5,000	5,000
3. Publications, advertising and promotional material, meetings and seminars and secretarial help	45,000	33,000
4. Short term consultants on specific technical issues	8,000	8,000
5. Travel and per diem for short term consultants	2,000	2,000
	* 110,000	100,000

* utilized from 1979 resources

X. GOVERNMENT COMMITMENT

INAN will co-ordinate the project drawing in appropriate resources such as the Society of Brazilian Paediatricians, Ministry of Health, LBA, Secretariat of Social Welfare, State Health Secretariats and

community entities for planning and implementation.

The Government will initiate and take necessary actions to reorganize existing services, affect changes in the legislative laws and implement a manpower training programme.

The Government will share the cost for promotional, advertising and mass media campaign.

Document 8006
UNICEF - Brasília
December - 1979

EVALUATION OF INFANT FEEDING PRACTICES

I BACKGROUND

It is now widely accepted that malnutrition affects physical growth, cognitive development, social development, resistance to infection and physical activity. In Brazil malnutrition among infants and young children is a serious problem and the vastness of the country along with the economic and regional disparities makes it difficult to come to grips with the problem.

The National Institute of Food and Nutrition (INAN) and the World Bank have compiled various studies on the subject. Their reports "Política Alimentar e Nutricional do Brasil" of August 1979 and "Brazil-Human Resources Special Report" of October 1979 gives detailed information on the overall nutrition situation in Brazil. Many of the studies reveal that nutritional disparities are concealed when looking at national averages. These disparities are more revealing and apparent when nutritional intake is measured for different economical and regional groups. Tables 1, 2 and 3 from the above mentioned World Bank report summarizes the situation of children from 0-18 years suffering from first, second and third degree malnutrition. The extent of malnutrition as per Gomez classification is:

(1) first degree malnutrition, 76-90% of normal weight for age;
(2) second degree malnutrition, 61-75%, of normal weight and
(3) third degree malnutrition, 60% or less of normal weight.

These tables show that about 30 million children in Brazil suffer from malnutrition.

Table 4 from the World Bank report gives the estimated population

with calorie deficits up to 200 calories per day, those with deficits in the 200-400 calories per day range and those with deficit above 400 calories per day for the year 1975. This shows that only 32.8% of the population is estimated to have adequate calorie requirements as per FAO/WHO standards. The table shows the regional urban/rural differences are rather substantial. It also shows that 20% of the Brazilian population have deficits up to 200 calories, 31% deficits in the range of 200-400 calories and 17.3% had deficits over 400 calories.

A family of five of the lowest income groups would need to spend at least one full minimum salary to provide a calorie adequate diet. The same size family in an urban situation would need around two minimum salaries. Considering the patterns of family expenditure, calorie consumption and expenses it is evident that income increase alone will not allow rapid progress in reducing malnutrition. It therefore suggests that investments in nutrition education for better utilization of existing local foods should accompany nutrition intervention programmes since massive transfer of income to the poorer people is not likely in the near future.

The National Nutrition Programme (PRONAN) administered by INAN has two major objectives:

(i) promote the direct purchase of foodstuffs utilized in the food supplementation sub-programmes from small and medium sized producers in depressed regions, and

(ii) promote real increments in the income of the whole population through lower food prices which is expected as a result of greater food supply and reduced intermediary costs.

The food supplementation is intended for pregnant and lactating women and pre-school aged children from low-income families.The food supplementation is supposed to be a temporary measure with

a longer term approach aimed at improving the viability of small scale food production oriented agriculture in poorer regions. For this reason PRONAN distributes natural foods to these vulnerable groups.

The principle subprogrammes involved in food distribution to mothers and children are:

(i) Nutrition in health programme (PNS)
(ii) Nutrition in metropolitan areas
(iii) School nutrition programme (PNE)
(iv) Pre-school programme (PROAPE)

(i) Nutrition in health programme (PNS)

Integration of nutrition with maternal-infant health care programmes is the principle emphasis of this programme. To qualify for food supplementation, beneficiaries must participate in the full range of health services offered by state governments. The programme operates in all of states in the following order of priority: Northeast,North, West-Central, Southeast and South. Table 5 extracted from the INAN report gives the total number of beneficiaries, quantity of food distributed and financial implications.

The division of beneficiaries are as follows:

20% pregnant women
8% lactating women
8% infants,6 - 12 months
64% children, 1-6 years

The natural food items distributed are milk, sugar, corn, beans, rice and manioc flour. The distribution is based on state government networks of health posts and on infrastracture provided by philanthropic organizations.

(ii) Nutrition in metropolitan areas

The Ministry of Welfare and Social Security (MPAS) through the Brazilian Assistance Legion(LBA) is distributing special instant foods developed by the University of Campinas in 4 municipalities of Rio de Janeiro, greater Belo Horizonte and satelite cities of Brasilia. A target population of 300,000 which includes pregnant and lactating women and children under 3 years of age have been reached by this programme. The pregnant and lactating mothers receive a fortified soup powder, consisting principally of dextrose, dried milk, corn flour, dried eggs, soya, minerals and vitamins. The soup is designed to give 445 calories a day. Infants (3-12 months) receive a dried milk mixture, with soya, rice flour, dextrose and saccharin. Young children (12-36 months) receive a strawberry flavoured milk shake drink in powdered form. This consists principally of powdered milk, dextrose, soya, powdered rice, vitamins and minerals. LBA is now planning to use a larger proportion of soya to replace the more expensive milk powder.

(iii) School nutrition programme (PNE)

The Ministry of Education and Culture through the National School Feeding Programme (CNAE) undertakes a school feeding programme for children in the 7-14 year age group. The supplementation is expected to satisfy 15 to 30% of the daily nutritional requirement. About 30% of the food distributed is indigenous and the remaining 70% is processed food. During the last 5 years CNAE has attended to from 11 increasing to 14 million students per year. The number of schools covered in 1978 was about 104,000.

CNAE has the overall responsibility for the execution of school feeding project in the São Francisco valley area in Bahia assisted by World Food Programme. The specific purposes of this project are to:

(i) improve the nutritional status of primary school children.

(ii) attempt to improve their dietary habits through a programme of nutrition education in schools using the school feeding programme as a practical application; and

(iii) encourage better school attendance and assist in decreasing the drop-out rate.

The target is 1 million primary school children of a total of about 1.5 million children enrolled in the state of Bahia. WFP input to this project will continue till end 1980 by which time about 48,000 metric tons of food is to be deliverd. The commodities include wheat flour, corn soy milk/corn soy blend, dried skim milk, edible oil, dried fish, dried eggs,canned meat and canned cheese.

(iv) Pre-school programme (PROAPE)

This programme concentrates in 7 municipalities of Pernambuco for the benefit of 4-6 year old children whose parents earn less than 2 minimum salaries. Existing school facilities are used for feeding the children with participation of mothers on a rotation system to supervise , prepare and distribute the food. About 50% of the schools in the selected areas have been covered. The supplementary food provides about 500 calories and 14 grammes of protein. Along with the feeding programmes other activities such as early childhood development, simple health services also take place. In 1978, the project covered 10,400 children through 74 schools.

II OBJECTIVES

The malnutrition problem in Brazil is a serious issue and there are many programmes and projects trying to improve the situation. Some of the programmes involve direct food supplementation and others involve food production, income generation, nutrition

education, health and environment etc. that have an indirect influence on the nutritional status.

1. The principle objective of this programme is to put together all available information on all pre-school and primary school supplementation programmes in Brazil, assess the impact of these on the nutritional status and come out with specific recommendations for the future of such programmes.

2. Stemming from the principle objective the impact and relationship of supplementary feeding programmes to long term agricultural and social developmental programmes are to be analysed and evaluated.

III STRATEGIES

1. Analyse the contents of existing feeding programmes to identify beneficiaries, nutritional quality and cost of supplementary foods.

2. Identify the long term objectives that these feeding programmes can achieve.

3. Identify the influence of these programmes in the local environment and the trends it can establish.

4. Study the role of community produced products and commercially produced products in feeding programmes.

5. Identify the link between long term nutritional development programmes and food supplementation programmes.

IV CONVERGENCE AND LINKAGES

This project proposal on evaluation of infant and child feeding

is a part of the total input from UNICEF in the field of nutrition which includes promotion of breastfeeding, eradication of goitre and cretenism and a possible assistance to control and prevent hypovitaminosis A. Promotion of breastfeeding forms part of infant and child feeding. A separate project proposal has been prepared for breastfeeding in view of the special nature of nutritional problems of infants of 0-6 months age group and since the project can start immediately. The project on the evaluation of infant and child feeding is limited to supplementary feeding of pre-school and primary shcool children.

It is evident in Brazil that increase in income alone will not solve the malnutrition problem. A concentrated effort in the field of nutrition education is essential to change the food consumption habits. This involves different Government and non Governmental institutions such as Ministries of Health, Education, Agriculture, Interior, Finance, regional development organizations church groups, community centres, mass-media, etc.

The recommendations of the WHO/UNICEF meeting in Geneva, in October 1979, in which the Government of Brazil was represented, will be used as a guideline.

V ASSIGNMENT OF RESPONSIBILITY

The National Institute of Food and Nutrition (INAN) will have the overall responsibility of coordinating the planning, provision of human and financial resources and implementation of project.

WHO through their advisor in INAN will provide technical advice on specific nutritional questions.

UNICEF would provide technical and financial input in the planning and implementation of the project. The UNICEF Senior Programme Officer on behalf of the Representative will be responsible to assess

regularly the progress and provide guidelines to UNICEF consultants.

VI PLAN OF ACTION

1. The initial task would be to compile information on all pre-school and primary school feeding programmes in Brazil. The information to include short and long term objectives number and type of beneficiaries type of food distributed, organizations involved, management and cost of programmes and food delivery systems used.

2. Analysis of the nutritional situation of children in areas covered by the programmes.

3. Analysis of the purchasing capacity and food consumption habits of people in these areas.

4. Determine from 2 and 3 if supplementation and/or nutritional education is required to change food consumption habits.

5. Determine long term plans of phasing out supplementation and phasing in self sufficiency.

6. Analysis of quantity and quality of existing food supplements to see if it matches requirements.

7. Explore alternative food supplements giving priority to local foods.

8. Analysis of management of existing programmes.

9. Analysis of local situation and delivery systems to decide on the choice of food distribution and/or feeding programmes.

10. Study the role of food industry participation in feeding programmes.

11. Study the use of soya in feeding programmes.

12. Analysis of the monitoring systems which should include baseline and progress data on choice of beneficiaries, types of food delivered, effectiveness of delivery systems, participation of target population, anthropometric response, impact on morbidity and mortality, impact on infant feeding practice and use of local foods, educational impact of programme, programme cost and cost effectiveness.

VII REFERENCES

The report "Food and Nutrition Policy for Brazil" published by INAN, in August 1979, would be a main reference document.

The World Bank country study "Brazil- Human Resources Special Report" published in October 1979, would be another main reference document.

Other specific reference documents on project and evaluation studies would be selected to serve as guidelines.

VIII UNICEF ASSISTANCE

The major input from UNICEF would be the provision of technical help to complete the evaluation work during the period 1980/81.

UNICEF would also provide financial assistance to cover limited expenses related to data collection, publications, promotional activities, meetings and other directly related local costs.

EXPENDITURES (US $)

	1980	1981
1. Consultant for coordinating the project	~~50,000~~ 37,000	52,000
2. Travel and per diem for consultant	~~5,000~~ 3,000	5,000
3. Short term consultants on specific technical issues	10,000	5,000
4. Travel and per diem for short term consultants	2,000	1,000
5. Data collection, publications, promotional activities, meetings and miscellaneous local expenses	33,000	27,000
	~~100,000~~ $5,500	90,000

IX GOVERNMENT COMMITMENT

INAN will co-ordinate the project drawing in appropriate resources from different Government departments through the Governing Council of INAN: The following Government institutions are represented in the Governing Council:

- Ministry of Health;
- Planning Secretariat of Presidency of the Republic;
- General Staff of the Armed Forces;
- Ministry of Agriculture;
- Ministry of Education and Culture;
- Ministry of Social Welfare and Assistance;
- Ministry of Labour;
- Ministry of Interior;
- Ministry of Industry and Commerce.

The Government will co-ordinate other technical expertise available in the country including but not restricting to the Society of Brazilian Paediatricians, Brazilian Nutrition Foundation, and food industry.

TABLE 1

CHILDREN WITH FIRST DEGREE MALNUTRITION, BY REGION AND AGE GROUP, 1975

Age Group	Thousands of Children				Percent of Age Group			
	Brazil[a/]	Northeast	Southeast	Frontier	Brazil	Northeast	Southeast	Frontier
Birth - 5.99 months	360	152	173	35	17.4	20.4	16.1	13.7
6.00 - 11.99 months	463	196	210	57	22.3	26.4	19.6	22.4
1.00 - 1.99 years	1,091	414	542	134	32.2	35.5	30.0	33.0
2.00 - 4.99 years	3,679	1,340	1,882	458	38.1	40.7	35.8	41.5
5.00 - 9.99 years	6,087	1,731	3,615	742	43.1	42.6	43.0	45.5
10.00 - 14.99 years	4,951	1,569	2,883	499	36.8	36.5	37.0	36.9
15.00 - 17.99 years	2,717	931	1,476	310	37.1	41.5	34.0	42.7
Total[a/]	19,349	6,332	10,783	2,234	37.2	38.2	36.2	39.0

a/ May not equal sum of components due to rounding.

Source: IBGE, ENDEF; Consumo Alimentar, Antropometria, Dados Preliminares, 4 volumes (Rio de Janeiro: IBGE, 1977 and 1978) for body weight of Brazilian children; FAO/WHO, (1973) Energy and Protein Requirements: Report of a Joint FAO-WHO Ad Hoc Expert Committee, FAO Nutrition Meeting Report Series No. 52/WHO Technical Report Series No. 522 for the normal age-weight distribution; 1975 Population by age groups from "baseline" demographic projections contained in Annex I of this report.

TABLE 2

CHILDREN WITH SECOND DEGREE MALNUTRITION, BY REGION AND AGE GROUP, 1975

Age Group	Thousands of Children				Percent of Age Group			
	Brazil[a/]	Northeast	Southeast	Frontier	Brazil	Northeast	Southeast	Frontier
Birth - 5.99 months	185	92	71	22	8.9	12.3	6.6	8.6
6.00 - 11.99 months	229	126	71	32	11.0	17.0	6.6	12.7
1.00 - 1.99 years	374	229	92	54	11.1	19.6	5.1	13.2
2.00 - 4.99 years	1,427	748	505	175	14.8	22.7	9.6	15.8
5.00 - 9.99 years	3,647	1,430	1,717	501	25.9	35.2	20.4	30.7
10.00 - 14.99 years	3,700	1,568	1,695	437	27.5	36.5	21.7	32.3
15.00 - 17.99 years	979	437	430	112	13.4	19.5	9.9	15.4
Total[a/]	10,543	4,630	4,581	1,131	20.2	28.0	15.4	23.3

a/ May not equal sum of components due to rounding

Source: IBGE, ENDEF: Consumo Alimentar, Antropometria, Dados Preliminares, 4 volumes (Rio de Janeiro: IBGE, 1977 and 1978) for body weight of Brazilian children; FAO/WHO, (1973) Energy and Protein Requirements: Report of a Joint FAO-WHO Ad Hoc Expert Committee, FAO Nutrition Meeting Report Series No. 52/WHO Technical Report Series No. 522 for the normal age-weight distribution; 1975 Population by age groups from "baseline" demographic projections contained in Annex I of this report.

TABLE 3

CHILDREN WITH THIRD DEGREE MALNUTRITION, BY REGION AND AGE GROUP, 1975[a/]

Age Group	Thousands of Children				Percent of Age Group			
	Brazil[b/]	Northeast	Southeast	Frontier	Brazil	Northeast	Southeast	Frontier
Birth - 5.99 months	51	28	15	9	2.5	3.7	1.4	3.6
6.00 - 11.99 months	30	21	3	6	1.4	2.9	0.3	2.4
1.00 - 1.99 years	21	18	1	2	0.6	1.5	c/	0.6
2.00 - 4.99 years	15	2	-	13	0.2	c/	-	1.2
5.00 - 9.99 years	51	40	3	8	0.4	1.0	c/	0.5
10.00 - 14.99 years	214	192	17	4	1.6	4.5	0.2	0.3
15.00 - 17.99 years	66	60	5	d/	0.9	2.7	0.1	c/
Total[b/]	447	361	44	42	0.9	2.2	0.2	0.7

a/ Third degree malnutrition may be underestimated because some children who were obviously far below normal weights were dropped before the final tabulations.
b/ May not equal sum of components due to rounding.
c/ Less than 0.1 percent.
d/ Less than 500

Source: IBGE, ENDEF: Consumo Alimentar; Antropometria, Dados Preliminares, 4 volumes (Rio de Janeiro: IBGE, 1977 and 1978) for body weight of Brazilian children; FAO/WHO, (1973) Energy and Protein Requirements: Report of a Joint FAO-WHO Ad Hoc Expert Committee, FAO Nutrition Meeting Report Series No. 52/WHO Technical Report Series No. 522 for the normal age-weight distribution: 1975 Population by age groups from "baseline" demographic projections contained in Annex I of this report.

TABLE 4

Table 15: ESTIMATED POPULATION WITH ADEQUATE DIETS, DEFICITS UP TO 200 CALORIES PER PERSON PER DAY, DEFICITS OF 200-400 CALORIES PER PERSON PER DAY, AND DEFICITS ABOVE 400 CALORIES PER PERSON PER DAY, TOTAL CALORIE DEFICITS; AND AVERAGE CALORIE DEFICITS ABOVE 400 CALORIES PER DAY, BY REGION AND URBAN/RURAL LOCATION, 1975

	Total Population (Thousands)	Population with adequate diet (Thousands)	Population with adequate diet (% of Total[a/])	Deficits up to 200 Calories: Population (Thousands)	Deficits up to 200 Calories: Population (% of Total[a/])	Deficits of 200-400 Calories: Population (Thousands)	Deficits of 200-400 Calories: Population (% of Total[a/])	Total Deficits up to 400 Calories (Million calories per day)	Deficits above 400 Calories: Population (Thousands)	Deficits above 400 Calories: Population (% of Total[a/])	Deficits above 400 Calories: Average deficit (Calories per person per day)	Deficits above 400 Calories: Total deficit (Million calories per day)	Total of all Deficits (Million calories per day)
Northeast													
Rural	17,739.8	5,361.2	30.2	3,775.9	21.3	6,173.8	34.8	1,958.6	2,428.9	13.7	540	1,310.4	3,268.8
Urban	14,291.7	1,217.6	8.5	1,460.6	10.2	4,660.8	32.6	1,473.0	6,952.6	48.7	529	3,678.4	5,151.3
Total[b/]	32,031.5	6,578.8	20.5	5,236.5	16.4	10,834.6	33.8	3,431.4	9,381.5	29.3	532	4,988.8	8,420.0
Southeast													
Rural	20,046.2	14,010.9	69.9	2,408.2	12.0	3,305.3	16.5	963.1	321.7	1.6	476	153.3	1,096.3
Urban	46,524.8	13,195.1	29.6	10,255.5	23.0	15,603.0	35.1	4,709.9	5,471.1	12.3	527	2,882.6	7,592.5
Total[b/]	66,571.0	27,206.1	42.1	12,663.7	19.4	18,908.3	29.3	5,653.0	5,792.8	9.0	524	3,035.9	8,688.8
Frontier													
Rural	5,268.7	678.9	12.9	975.7	18.5	1,850.7	35.1	656.0	1,763.4	33.5	593	1,087.2	1,717.1
Urban	5,274.0	649.8	12.3	1,042.6	19.8	1,948.1	36.9	630.0	1,633.4	31.0	617	968.2	1,626.2
Total[b/]	10,542.7	1,328.7	12.6	2,018.3	19.2	3,798.8	36.0	1,286.0	3,396.8	32.2	605	2,055.4	3,341.4
Brasil													
Rural	43,054.7	20,051.0	46.6	7,226.7	16.8	11,427.2	26.1	3,531.5	4,514.0	10.5	565	2,550.8	6,082.3
Urban	64,090.5	15,062.6	23.5	12,691.8	19.8	22,116.5	34.8	6,858.5	14,057.1	21.9	536	7,529.1	14,367.6
Total[b/]	107,145.2	35,113.6	32.8	19,918.5	18.6	33,541.7	31.3	10,370.2	18,571.1	17.3	543	10,079.8	20,450.0

a/ Population in previous column as percentage of population in first column.
b/ Totals may not equal sums of components due to rounding.
Source: Total population by region and urban/rural location; from IBGE, Anuario Estatistico do Brasil, 1976 (Rio de Janeiro: IBGE, 1977). All other estimates derived from unpublished ENDEF data (see text and Appendix A for methodology).

TABLE 5

NUTRITION PROGRAMME

POPULATION REACHED, ACCORDING TO REGIONS

BRAZIL - 1975/79

REGIONS	PERIODS				
	1975	1976	1977	1978	1979
POPULATION REACHED: (in thousands of persons)	252	1.022	1.806	2.923	2.413 (*)
- NORTHEAST	132	56		1.856	1.589
- NORTH	17	71	163	241	185
- WEST-CENTRAL	22	74	131	134	130
- SOUTHEAST	56	208	237	417	283
- SOUTH	25	107	241	274	227
FOOD DISTRIBUTED: (METRIC TONS)	5.402,3	33.982,1	74.259,7	98.492,9	126.067,0 (**)
FUNDS: (In millions of cruzeiros)	62,6	203,1	419,5	879,1	1.848,5 (**)

SOURCE: USSA/INAN

(*) It is foreseen that, until the end of the year, 3 million or more will benefit from the number of vancancies in the programme by rotative attendance.

(**) Programmed