4-1223

UNITED NATIONS
ECONOMIC AND SOCIAL COUNCIL

Distr.
LIMITED

E/ECA/UNCTC/13
15 September 1982

Original: ENGLISH

ECONOMIC COMMISSION FOR AFRICA

Joint ECA/UNCTC Unit on Transnational Corporations

INFANT AND YOUNG CHILD FEEDING IN AFRICA: THE ROLE OF TRANSNATIONAL CORPORATIONS

A technical paper

CONTENTS

I. INTRODUCTION

The survey upon which this report is based was carried out as part of an effort by the Joint ECA/CTNC Unit on Transnational Corporations to make a positive contribution towards the understanding of basic problems, difficulties and opportunities faced by the developing countries of Africa in relation to:

a) Infant formula promotion and marketing policies and their impact on infant and young child feeding practices in Africa;

b) Current measures applied by African countries for ensuring better infant and young child feeding through the establishment of effective policies and programmes for::

i) promoting and protecting breast feeding, including the enactment and implementation of national codes of infant formula marketing conduct to eliminate the dangers arising from inappropriate promotion and use of bottled breastmilk substitutes.

ii) developing and promoting adequate weaning practices, including the production and use of high protein food formulas appropriate to local needs and resources.

The actual survey was undertaken in two consecutive portions covering case studies on eight countries in different subregions of Africa. The period 6 to 28 February 1981 was devoted to empirical data gathering in Ethiopia, Malawi, Botswana and Zimbabwe. The second portion of the survey from 18 July 1981 to 21 August 1981 was devoted to case studies on the United Republic of Cameroon, the Ivory Coast, Liberia and Egypt. The amount of time alloted per country ranged from five to seven working days.

Examination of the main issues was based on whatever limited documentation was obtainable in each country visited and interviews with relevant departmental officers and professionals at the Ministries of Health, Agriculture, Commerce and Industry, Education and Economic Planning. By and large higher government officials concerned with national policy formulation were inaccessible. This was supplemented whenever possible by visits to baby food retail outlets, weaning food processing plants and some MCH clinics involved in applied nutrition programmes.

Additional information relevant to the present survey was also gathered by reviewing literature, including the 1975/76 WHO Collaborative Study on Breastfeeding and the WHO/UNDP sponsored Intercountry Nutrition Workshop held in Gaborone in November 1980 which examined the situation in eight African countries, Uganda, the United Republic of Tanzania, Botswana, Lesotho, Swaziland, Mozambique, Zimbabwe and Zambia.

At the same time, the consultant had the unique opportunity of getting a good briefing on the said workshop and its follow-up actions from Dr. J. Kreysler (WHO Intercountry Nutrition Coordinator, stationed in Gaborone) during the country visit to Botswana in February 1981. A similar briefing on the newly established International Code of Marketing of Breastmilk Substitutes and its follow-up was obtained during the consultant's visit to the Family Health Division, WHO, Geneva, in August 1981.

II. SUMMARY OF FINDINGS AND CONCLUSIONS

The main points that have emerged from the present study may be summarized as follows:

a) Protein-calorie malnutrition, iron deficiency anemia and other preventable childhood diseases, including measles and parasitic infestations are highly prevalent among children, particularly those in the age group of 6 months to 5 years from socio-economically underpriviledged urban and rural families. The need for effective national policies and programmes to improve the nutrition and health status of such vulnerable groups appears to be gaining increasing recognition throughout all developing countries of the African region;

b) All countries of the African region appear to have a strongly entrenched breastfeeding tradition which, coupled with socio-economic constraints among the majority of the urban and rural populations of such countries, including the high cost of breastmilk substitute products, still continues to serve as the major obstacle against the impact of infant formula promotion on infant feeding practices on a national level;

c) The most active participants in the promotion and marketing of babyfoods, including breastmilk substitutes, high protein weaning formulas and other processed foods are a limited number of major transnational corporations based in the United States and Western Europe;

d) Nestle appears to enjoy the largest market share for infant formula and weaning food products on the whole and almost a virtual monopoly of the infant formula market in Zimbabwe and of weaning foods in the Ivory Coast through its local subsidiary plants operating without competition from foreign or local firms;

e) The market for industrially processed baby foods appears to be concentrated mainly in urban centres and with no limitation in the use of retail outlets except in a few countries such as the United Republic of Cameroon, the Ivory Coast and Egypt where bottle fed breastmilk substitute products are dispensed to customers only in pharmacies and upon prescription;

f) Although the capabilities of individual countries for coping with the adverse consequences arising from inappropriate promotion and use of bottled breastmilk substitute products still appears to be too limited in spite of increasing efforts to promote breast-feeding practices through existing M C H programmes, some positive results have apparently emerged from continuing criticism and pressures by the international community urging the industry to act more responsibly in its infant formula sales promotion policies and practices, including the labelling of such products with appropriate information indicating the superiority of breast feeding; cessation of infant formula advertising using the mass media; and withdrawal of milk nurses;

g) Although all countries appear to be involved in applied nutrition work operating mainly under current MCH programmes, such activities are still too limited to have the desired impact on the nutrition status of infants and young children on a national scale. The most important constraints faced are failure on the part of policy makers to give adequate priority to the solution of nutrition problems within their national socio-economic development policies and programmes, inadequate skilled manpower and financial and material resources;

h) While only a few countries, such as Ethiopia, Malawi, Zimbabwe, Egypt and Algeria have managed to develop and produce on a large scale high-protein weaning formulas based largely on local raw materials, it appears that such indigenous weaning food mixes are still not produced in sufficient quantities and at prices low enough to be accessible to the majority of the vulnerable low-income population. It appears that the principal constraint to self-reliance in the production and use of local weaning food mixes is the lack of basic policy commitment and action on a national scale. As a result there is still too much dependence on food-aid, including raw materials and finished products imported at high costs when all such products could be made available locally and at much reduced costs. At the same time, locally processed weaning food mixes continue to face too much strong competition from well established imported equivalent products supplied by transnational corporations as well as a number of constraints including high production costs, irregular output and poor promotion and marketing efforts;

i) Undoubtedly effective action for improving the health and nutrition status of children in general and the elimination of the infant formula problem in particular will require much more than the current limited piece-meal efforts of individual countries.

Since the majority, if not all, individual African countries lack the capabilities for assessing adequately the extent and gravity of nutrition problems on a national scale and for establishing the necessary corrective policies and programmes, their individual efforts and capabilities should be strengthened further through collective efforts supported by international organizations, such as WHO, UNICEF, FAO/WFP and ECA which already render various forms of assistance to them. Such efforts could include:

a) Utilization of existing networks of national agencies dealing with food and nutrition as sources and mechanisms of information exchange and dissemination;

b) Exchange of knowledge and experience on policies, legislation and other measures, including the establishment of a common policy on the recently established International Code of Marketing of Breastmilk Substitutes and its monitoring;

c) Establishment of national and regional centres for research into infant and young child nutrition, including the training of nutritionists and preparation of appropriate educational materials for distribution to health workers, community leaders and the public;

d) Fostering action through existing subregional mechanisms including WHO subregional meetings and MULPOCs;

e) Full utilization of expertise existing at the regional and sub-regional levels;

f) Exchange of visits of multidisciplinary teams for sharing a specific country's expertise, technology and experience in a given area;

g) Allocation of a leading role to certain countries in respect of programmes in which they have special expertise;

h) Periodic meetings for exchanging knowledge and experience on ways and means of obtaining external assistance and how best such assistance could be directed for the promotion of breastfeeding and infant and young child health in Africa.

III. THE INFANT FORMULA PROBLEM

Among the many problems faced by developing countries in their efforts to promote and protect infant and young child health and nutrition a basic issue that has gained activities increasing attention and concern is the aggressive sales promotion of transnational corporations (TNCs) for their commercial breast milk substitute products.

This concern is a direct consequence of observations by numerous professional investigators throughout the world that intensive sales promotion of artificial infant formulas has led to a progressive decline in breast-feeding throughout the developed world. Since it is responsible for similar trends observed in many developing countries where adverse socio-economic and environmental conditions prevail (contaminated water and unsanitary environment, lack of facilities, means, and know how for appropriate preparation, storage and use of artificial infant formulas and their high cost in relation to income), it constitutes major public health problem.

This concern by the international health and nutrition community may be traced to about 1970 when such terms as "commerciogenic malnutrition" and "baby bottle disease" began to be used by outspoken critics of infant formula TNCs. The former term was actually coined by Dr. Derrick B. Jelliffe, a noted expert in nutrition, in describing the adverse consequences brought about by TNC infant formula promotion. He charged that intensive sales promotion efforts by manufacturers in developing countries were leading mothers to abandon breast-feeding in favour of bottle feeding with substitutes (which they could ill afford to purchase), to hook their babies on the bottle (as a result of premature cessation of lactation), and to stretch their formula supplies and use contaminated water. The end result is malnutrition, disease and even death. The common view presented by all subsequent investigations has been that unrestricted promotion of TNC breast milk substitute products poses real dangers to the lives of millions of infants and young children in the developing world.

The deep concern felt by Governments and other organisation led to a meeting convened jointly by WHO and UNICEF in October 1979 which succeeded in defining the essential character of the problem and activities to be undertaken by Governments, United Nations organisations, the industry and other interested parties for improving infant and young child feeding practices with special emphasis on the situation in developing countries as a result of the greater seriousness and magnitude of the problem in these areas.

In referring to the problem of infant formula promotion the WHO/UNICEF Joint Meeting on Infant and Young Child Feeding Practices drew attention to the fact that, although industrial breastmilk substitutes may, under certain circumstances (when mothers cannot breast feed) be essential and life saving for the infant, it has proved very difficult to avoid their excessive and inappropriate use where breast milk substitution is neither necessary nor desirable and that Governments should take appropriate measures for regulating infant formula promotion and marketing practices as well as for ensuring appropriate feeding practices to the benefit of the pregnant and lactating mother, the infant and the young child.

The problem of misuse of weaning foods was also dealt with. Attention was drawn to the fact that foods intended as supplements have, in some areas, been used as complete baby foods, thus creating problems of malnutrition. Industrially processed milk products too are often used as breastmilk substitutes without the necessary modification. Another problem noted relates to dehydrated milk commonly distributed to infants in supplementary feeding programmes. Attention was drawn to the possibility of this practice contributing to a decline in the frequency and duration of breast-feeding and the need for its evaluation as well as appropriate preventive measures against dependence on industrially processed milk and weaning food products obtained through food aid programmes since breast-feeding would be more valuable.

The WHO/UNICEF Joint Meeting recommended that:

a) The government of each country has the responsibility to promote coherent food and nutrition policies which should give special attention to mothers, infants and children;

b) Breast-feeding is the only natural method of feeding babies and it should be encouraged in all countries; in particular, marketing of breast milk substitutes and weaning foods should be designed not to discourage breast-feeding;

c) There should be no sales promotion, including promotional advertising to the public of products to be used as breast milk substitutes or bottle supplements and feeding bottles;

d) Promotion among health personnel should be restricted to factual and ethical information;

e) There should be an international code of marketing of infant formula and other products used as breastmilk substitutes to be supported by both exporting and importing countries and observed by all manufacturers;

f) There should be no marketing or availability of infant formula or weaning foods in a country unless marketing practices are in accord with existing national codes or legislations or, in their absence, with the spirit and the recommendations of the WHO/UNICEF Joint Meeting or with any agreed international code.

The draft International Code on the Marketing of Breastmilk Substitutes worked out on the basis of the Joint WHO/UNICEF Meeting has not yet been finalized.* Individual Governments of developing countries particularly in the Eastern and Southern African subregions, excepting Lesotho, still seem far from being able to establish their own national codes. In the meantime the problem of infant formula promotion remains unsolved in these countries.

* At the time this report was being prepared.

IV. THE LEADING BABY FOOD CORPORATIONS

The infant food industry consists of TNCs with a pharmaceutical orientation (Abbot, Bristol Meyers, American Home Products, etc.) and those with a food processing orientation (Nestle, Bordon, Carnation, etc.). Early TNC growth in the dairy industry was led by Nestle which with Bordon originated condensed and evaporated milk products.

Virtually all large United States and European TNCs are active in the developing countries. Among the leading firms which have about 110 affiliates in 45 developing countries, Nestle is the most active in all regions including the countries visited by the present mission. In canned and dried milk products Nestle and Carnation are market leaders in much of Europe and North America with market control in at least 25 developing countries. Among the three United States based rivals to Nestle in milk based baby foods, Bristol Meyers and American Home Products have processing affiliates in developing countries.

Among 16 TNCs that are world leaders in the production and marketing of baby foods, three or four hold at least 90 per cent of sales in six developed and 11 developing countries. Nestle is the leading producer or distributor in all but four of these markets.

Sales of infant formulas, excluding all other commercial milk products, have been estimated to amount to about $US 1.5 billion world-wide and about $US 600 million in the developing world. The market shares of 12 leading TNCs for milk based infant formula products in 14 selected countries of the third world are shown in table I.

The results of the WHO Collaborative Survey undertaken in 1975-1976 on the activities of infant food TNCs in four selected developing countries: (Ethiopia, Nigeria, India and the Philippines) are summarized below.

A total of 42 TNCs from 13 Western industrial countries market milk foods in the four countries surveyed. The majority of these firms had established subsidiaries throughout the third world, each firm being represented in 50 to 100 countries around the world. Between them, these firms represented 50 different brands and 200 varieties of products.

In these four African countries alone the range of products marketed included a variety of infant formulas and milk powders, as well as condensed and evaporated milk products which were accompanied by bottle feeding tables suggesting that they were intended to be sold as infant foods.

The distribution networks used were wide, including pharmacies and food stores. Health care institutions and personnel were used as avenues of promotion where milk nurses and mother craft staff were active. The distribution of free samples, including bottles to hospitals and mothers were common.

Table 1. Milk-based infant formulas: Market shares and/or rank of leading producers in selected countries

Country		Ethiopia	United Republic of Tancania	Nigeria	Malawi	Botswana	Zimbabwe	India	Srilanka	Malaysia	Philippines	Colombia	Mexico	Peru	Venezuala
Year		1975	1976	1975	1980	1980	1980	1975	1977	1977	1975	1976	1977	1976	1977
Estimated sales $US millions		1.5	2.5	50.0	-	-	-	51.0	20.0	20.0	22.0	20.0	40.0	81.0	-
TNC	Home base	%	%												
Nestle	Switzerland	40	80	40	I	I	I	15	32	40	47	70	I	65	I
Abbot	United States	10		13								5			
Bristol Meyers	" "										14				
American Home Product	" "			19	II	II	II				38	25	III	25	II
Glaxo	United Kingdom							15	11						
Unigate	" "			18					25						
Varta	Federal Republic of Germany														
Morinaga	Japan	25													
Meiji	Japan	20													
Wassenen	Netherlands									40					
Dumex	Denmark									10					
Four leading TNCs Percentage		95+	98+	90	100*a	100*a	100*a	93	94	90+	99+	100	95	99+	95+

*a - Between the two TNCs (Nestle and Wyeth) virtually monopolizing the infant formula market in Malawi, Botswana and Zimbabwe, Nestle has by far the larger share of the market.

Source: 1) Observation of present study mission to Ethiopia, Malawi, Botswana and Zimbabwe, February 1981.
2) TNCs in the Food Processing Industries in the Developing Countries: UNCTC report, 5 February 1980.
3) WHO Collaborative Study on Breast-feeding: Working Paper No. MCH/79?, Joint WHO/UNICEF Meeting on Infant and Young Child Feeding, 9-12 October 1979.

There was little evidence of policies concerning market limitation, market growth, market segmentation or recognition of the various needs of different socio-economic market target groups. Few firms had undertaken studies of possible adverse effects of bottle feeding. None had established any system for monitoring possible adverse effects arising from their infant formula marketing and promotion efforts.

The total amount of infant foods sold in the four countries during the period 1975-1976 was approximately 37,300 tons with an over-all sales volume of $US 125 million. The cost of complete feeding using commercial products in relation to average income in the four countries was found to be high. The situation is summarized in table 2.

Table 2. Cost of six months full feeding with breast milk replacement formula

Country	in $US	Cost of formula as a percentage per capita of GNP
Ethiopia	54-100	70-100
India	51- 79	50- 80
Nigeria	60-120	30- 65
Philippines	49-127	15- 40

Note. Cost of formula is shown as a range between the lowest and highest priced products using six selected brands

Source: Ibid

Throughout the developing world, commercial infant formula is priced at over $US 2 per pound of powder. Proper feeding for six months would require the use of 50 pounds of formula, thus necessitating the expenditure of at least $US100 for formula, excluding expense of bottles, nipples and ancillary expenses in terms of fuel for boiling water. This pushes, in most developing countries, the cost of artificial feeding to the limits of annual per capita income for most people. Yet the cost of improving the diet of the lactating mother so as to enhance breast milk feeding is immensely low by comparison.1/

Among the large number of infant food TNCs selling a variety of brand products in the selected African countries surveyed both under the WHO Collaborative Study (1975-1976) and the present study mission only a few dominated the market. The largest of these covered about 40 per cent of the market, while the four largest together controlled 90 to 99 per cent of the market (see table 1).

1/ INFACT Newsletter, September 1979.

The price of commercial infant formulas in the four selected countries visited by the present mission in February 1981 was found to range between $US 5 to 9 per kilo, thus raising the current cost of artificial feeding even much higher than the above findings.

Personal sales were felt to be an important aspect of market growth and elaborate sales organisations had been established around this technique. Better sales performances by company sales representatives were encouraged through income incentives. The principal objectives of these representatives was to push products aggressively.

The very important role given to advertising by TNCs and its mode of application particularly in developing countries lacking policies and programmes for implementing adequate control measures is amply demonstrated by the following remarks quoted from Business International of 6 August 1978:

> "Use the visual and colourful; seek to achieve product identification and brand loyalty through non-verbal means - especially when illiteracy is widespread, a pictorial or symbolic trademark can be a great advantage; create own media for advertising, when the country lacks effective means - such as cinema or "phon" - vans; gear adds towards women since they are principal consumers; pick the media with the greatest penetration into the country, i.e. in rural areas with high illiteracy, radio is sometimes the most effective means of communication; try to use a Western image to establish your products as a status item in rapidly developing areas where modernization is associated with "Westernization".

V. PUBLIC CRITICISM AGAINST THE INFANT FORMULA INDUSTRY

The problem of infant formula promotion, particularly in the last 10 years, has been the subject of much concern to professionals in the health and nutrition fields, educators, scientists, church movements and consumer groups. World-wide criticism against the infant formula industry's persistence in its aggressive sales promotion policies and practices has led to intense pressure, often including boycotts and court battles, urging the industry to act more responsibly towards efforts for eliminating the adverse consequences resulting from such policies and practices.

In a report that was particularly critical of Nestle, War on Want (a British charity organisation) published an article in 1974, entitled "Baby killer", describing the activities of baby foods TNCs in Africa. Within a year, public action groups in Europe were raising the issue of infant formula marketing and promotion and confronting Nestle in a variety of public forums. This was to lead to a court battle between Nestle and a group of its critics over an allegation portraying Nestle as a killer of babies. The publicity generated by this court battle gradually created public awareness in the United States as well. A church movement known as the Inter-faith Centre on Corporate Responsibility (ICCR) focused its critical attention on the three leading United States infant formula TNCs, Abbot, Bristol Meyers and American Home Products. Another public action group, called the Infant Formula Action Coalition (INFACT), was formed in 1977 to increase public awareness and pressure on the industry, including boycotts of Nestle products.

Criticism against infant formula promotion in the third world has also been intensified within various professional associations and congresses, all leading to recommendations for action programmes to promote breast-feeding and curtail the promotion of artificial feeding particularly in the developing countries of the world.

VI. EFFORTS OF INTERNATIONAL ORGANISATIONS

The Joint WHO/UNICEF Conference held in Bogota in 1970 was the first main international forum which dealt with the issue of infant formula promotion. Within the same year another meeting organised by the United Nations Protein Calorie Advisory Group (PAG) attempted to generate a consensus among nutritionists, personnel of the industry and government representatives from developing countries about action to resolve the problem of infant formula promotion and infant malnutrition.

In 1974, the 27th World Health Assembly adopted a resolution identifying infant formula promotion as a cause of declining breast-feeding and urged countries to review sales and promotion activities relating to breast-milk substitutes and to introduce appropriate remedial measures, including advertisement codes and legislation where necessary. This was followed by similar recommendations at succeeding World Health Assemblies.

In line with their consistent efforts to promote breast-feeding and curb inappropriate sales promotion of TNC infant formula products, WHO and UNICEF organised a joint meeting on infant and young child feeding in October 1979 at which representatives of the various interested parties were invited to discuss basic issues and opportunities requiring individual as well as collaborative efforts with particular emphasis on the needs of developing countries. The statements and recommendations of the meeting, including the proposal for establishing an international code of marketing of breast-milk substitutes were endorsed by the 33rd World Health Assembly. The revised version of the Code (Document A/33/6) is to be presented to the 34th World Health Assembly in May 1981 after prior consultations with all parties concerned.

In addition to its appeal urging member States to promote breast-feeding and adequate weaning practices, and control formula promotion through the establishment of appropriate policies, legislation and implementation programmes, the 33rd World Health Assembly also called upon the Director General of WHO to identify activities for promoting the application of the recommendation of 1979 WHO/UNICEF Joint Meeting on Infant and Young Child Feeding. Such activities which may require mobilization of resources, including those of other United Nations agencies, involve updating the current version of the International Code of Marketing of Breast milk Substitutes, reviewing current national policies, legislation and actions and undertaking various action programmes to enhance the capabilities of developing countries to promote breast-feeding and appropriate weaning practices.

VII. THE INFANT FORMULA INDUSTRY'S SELF-REGULATORY CODES

The first major response of the baby formula industry to public criticism and pressure was the formulation by a number of large TNCs, led by Nestle, of the International Council of Infant Food Industries (ICIFI) in 1975, followed by the establishment of a self-regulatory code of ethics for formula promotion ("Code of Ethics and Professional Standards for Advertising, Product Information and Advisory Services").

That the immediate intention of the subscribers to the 1975 "ICIFI Code" was to divert public attention and pressure directed upon the industry was obvious from the start. Not only was the code grossly inadequate in its approach to the basic issues of the infant formula controversy and its response to public criticism, but it was designed to admit no wrong doing and to justify the role of the industry as a provider of essential supplies for infant nutrition. Furthermore, the code addressed itself only to marketing practices but not to marketing effects and secondly to restrictions of certain forms of promotion without signalling a clear-cut commitment for curtailing the widespread availability of costly baby foods to poor and illiterate mothers of the third world who are not appropriate customers.

The significance of the ICIFI Code was eroded as professional criticism continued. The United Nations Protein Advisory Group (PAG) issued an internal document highly critical of the ICIFI Code. Furthermore, increasing public criticism including boycotts were to make a significant contribution to forcing modifications of the discredited code.

In undercutting the basic position of the 1975 ICIF Code, Abbot established its own more restrictive code of Ethics, including limitation on direct consumer advertising and taking "milk nurses" out of uniform. Bristol Meyers had refused to admit any wrongdoing until 1975 but was forced to modify its marketing policies after being entangled in a long-drawn out court battle with church groups over unethical business practices. The company's latest code prohibits consumer contact of any kind, commits the firm to placing strongly worded warnings on formula labels, to limiting the distribution of free samples exclusively to physicians, to disseminating scientific information about advantages of breast-feeding, and suspension of milk nurses. Nestle was also to move beyond the ICIFI Code by announcing significant changes in its marketing policies in response to continued criticisms and consumer boycotts of its products.

Undoubtedly, the establishment of the ICIFI Code and the subsequent more appropriate individual firm codes have at least proved the acknowledgement by the infant formula industry that the marketing and promotion of formula products to mothers in the developing world could not continue in an unrestrained manner and that the market for such products did not consist of every baby in the world.

VIII. AN INTERNATIONAL CODE OF MARKETING CONDUCT

Since the establishment of the 1975 ICIFI Code and the individual firm codes that came out subsequently are essentially guide lines for marketing rather than fundamental business philosophies, they could not serve as acceptable instruments to meet the growing demands of the internationl community that the industry should fully assume its share of responsibility towards elliminating the adverse consequences arising from formula promotion.

The International Code of Marketing of Breast-milk Substitutes, prepared by WHO and UNICEF and adopted by the 34th World Health Assembly views the marketing of breast-milk substitutes and weaning foods within the framework of the problems of infant and young child feeding as a whole with the aim of contributing to the provision of safe and adequate nutrition for infants and young children, for which purpose it has endorsed the following main principles:

a) That all interested parties, namely Governments, organisations of the United Nations system, non governmental organisations (including woman's organisations in particular), experts in various related disciplines, consumer groups and the infant food industry must collaborate in activities aimed at improving material infant and young child health and nutrition;

b) That the encouragement, promotion and protection of breast-feeding are a socially shared responsibility that member States should undertake by all possible means, including enactment of national legislation when necessary;

c) That whilst the infant food industry produces nutritionally sound products, it has a special responsibility to ensure that these products are not promoted directly or indirectly to the detriment of breast-feeding;

d) That since it is important to provide appropriate supplementary feeds to the infant usually starting from the age of four to six months, every effort should be made to develop and make available such foods in accordance with prevailing local conditions.

TheCCode envisages in particular, the need to adhere to the following proposed basic rules:

a) That the production, storage and distribution as well as advertising of infant feeding products should be subject to national legislations and other measures appropriate to the country concerned;

b) That relevant information on infant feeding should be provided by the health care system of the country in which the product is consumed;

c) That products should meet international standards of quality and presentation, particularly those developed by the Codex Alimentarius Commission, and that their labels clearly inform the public of the superiority of breast-feeding;

d) That there should be no promotion or advertisement of infant formula, bottle-fed breast-milk supplements or feeding bottles to the public and that no health facility or health worker should be used as an instrument for such promotion or advertisement;

e) That no breast milk supplement be marketed or promoted as breast-milk substitute and that all labels of infant formulae and breast-milk supplements should effectively communicate the superiority and benefit of breast-feeding;

f) That in addition to Governments carrying the responsibility of monitoring the application of the Code, manufacturers marketing products covered by the Code should accept the obligation to monitor their own compliance with it.

On the whole the draft International Code has made a good start in dealing with one important aspect of a variety of social, health and nutrition measures that may be required to promote infant and young child health and nutrition in the developing world. However, its real significance will, in the final analysis, depend upon its acceptability by both exporting and importing countries concerned and their capabilities in establishing adequate policies, legislations and implementation mechanisms. In the meantime developing countries, in particular, will continue to be plagued by the baby formula promotion problem so long as they are unable to demonstrate effectively their unwillingness to expose mothers, infants and children as targets to inappropriate sales promotion of costly formulas and their adverse consequences.

IX. GOVERNMENT EFFORTS: CONSUMER PROTECTION MEASURES

A. Exporting countries of the developed world

So far the greatest efforts in over-all consumer protection measures appear to have occured in developed countries. Such measures have included restrictions on advertising (Federal Republic of Germany, 1969), advertising to children, United States, 1978, comparative advertising as well as false, deceptive or misleading information (Canada, 1972), etc.

An example of a significant step taken by the infant formula exporting countries is the Hearing held on 23 May 1979 by the United States Senate Health and Scientific Research Sub-Committee on the use and promotion of artificial baby formulas in the developing world. The detrimental impact of infant formula promotion and use in developing countries and the inadequate response of the industry to criticisms were clearly brought out through the testimonies of third-world professionals in the fields of health and nutrition, church groups and others.

The infant formula industry denied responsibility for the socio-economic conditions of the developing world but admitted to not having evidence for its claims that infant formulas were used only by the affluent. It is under such circumstances that experts at the Hearing pronounced, in the most emphatic terms, that it was about time the infant formula industry should bear full responsibility for proving that the products it promoted actually served a public purpose in the developing world.

Subsequent to this, a significant piece of new legislation was introduced into the United States House of Representatives in May 1979. Called the Infant Nutrition Act of 1979, the bill would have effectively controlled the marketing and promotion of infant formula by United States based TNCs in the third world. Unfortunately, not only did the United States fail to carry this commendable initiative forward, it was to remain the only country among western developed nations which opposed the establishment of the International Code of Marketing of Breastmilk Substitutes endorsed by the thirty-fourth World Health Assembly in May 1981.

B. Developing countries

Difficulties in controlling the adverse impacts associated with the marketing and promotion of infant formulas have led some developing countries to consider direct controls on distribution, an out-right ban on certain TNC practices or prohibition sale of specific products. Such countries as Algeria, Zambia, Ghana and perhaps others are moving towards buying infant formulas in bulk from the international market through centralized public agencies. The formula is then packaged and labelled locally stressing the advantages of breast-feeding as well as the risks and costs of formula use.

Papua New Guinea's experiment in passing a law requiring a prescription for the purchase of feeding bottles and nipples has led to a rise in breast feeding and an improvement of the health of infants Indonesia requires that condensed and evaporated milk products be clearly labelled as unacceptable for infant feeding. Jamaica has been quite active in restricting advertising and promotion of formulas including banning the accessibility of government health care institutions to milk nurses. As indicated earlier, only Lesotho has made significant progress towards the establishment of a national code on the marketing of infant formulas among the Eastern and Southern African countries including the four visited by the present mission. Even so it was observed that TNCs have been made to refrain from advertising and promoting their formula products to the public mainly as a result of Ministry of Health's efforts for promoting breast-feeding and curtailing inappropriate formula promotion.

On the whole, developing countries are faced with the difficult problem of designing, passing and implementing appropriate legislation. Basic constraints worth noting are the time required for establishing such legislation and the high costs requiring skilled technocrats and regulatory machinery for vigilant enforcement. Moreover TNCs have the power to affect which laws are passed and how they are enforced 2/. Also many companies by pass laws on restriction on formula promotion. For instance, according to the observations of ICCR researchers, the Jamaican

---

2/ E.g. Nestle has been said to have successfully lobbied to induce the South African Government to adopt a code which is essentially a rewrite of the ICIFI Code.

Ministry of Health had forbidden TNC milk nurses from entering government hospitals and clinics yet, Bristol Meyers' milk nurses were found in the maternity wards of the Government's largest maternity hospital. While similar observations were made in Malasia, in Singapore Dumex milk nurses were also able to by evade similar government restrictions by simply moving just beyond hospital gates to intercept mothers on their way in or out of the hospitals.

C. The development and use of high protein weaning foods

It is also important to recognize that as pressure mounts on infant formula promotion, some TNCs respond by stepping up the promotion of weaning formulas which would be inappropriate for nutritionally vulnerable mothers, infants and young children in developing countries because of their high cost. Banning inappropriate promotion of such commercial products along with infant formulas could represent a comprehensive approach to consumer protection measures. Such an approach should be complemented by government efforts to encourage the development of adequately nutritious low-cost weaning foods based on local resources - at household and community levels - together with other socio-economic and educational measures to enable the nutritionally vulnerable poor to derive adequate benefit from them.

In areas where ingredients for home preparation of weaning foods are not available efforts could be made first to increase local production or market availability. When this is not feasible industrially processed foods could be made available.

Considerable experience has been gained in several countries of the third world in the development and industrial production of new supplementary food mixtures (weaning foods) of proven adequacy in terms of nutritional value, safety and consumer acceptability. However, the cost of industrially manufactured products tends to be more expensive than home prepared mixtures and it may be necessary as a temporary measure to subsidize the prices of such locally made products for all or some families in the context of long term national food and nutrition policies.

The range of protein and calorie-enriched weaning food mixtures currently manufactured and distributed commercially through food distribution programmes, as in Central America, Colombia, Turkey, India, Ethiopia, Malawi, Zimbabwe, etc. may be illustrated by the following examples:

a) Incaparina developed by the Institute of Nutrition of Central America and Panama (INCAP) in Guatemala, has been under commercial production since 1961. The product is made according to different formulae and may include cotton seed flour (38 per cent), maize flour (58 per cent), a groundnut isolate (25 per cent), torula yeast (3 per cent) and various vitamin and mineral supplements;

b) Supramine of Algeria is also manufactured according to different formulae and one of its versions includes hard wheat flour (28 per cent), chick peas and lentil flour (56 per cent), milk powder (10 per cent) and other fortification in ingredients;

c) Spray dried protein food developed by the Central Food Technology Research Institute of India includes wheat flour (65 per cent), a groundnut isolate (25 per cent), skim milk powder (10 per cent) with mineral and vitamin additions is now produced under the name of "Bal-Ahar" and has played an important role in the government nutrition programme;

d) Faffa developed by the Ethiopian Nutrition Institute also according to different formulae and launched for the first time in 1967 is composed of wheat flour (57 per cent) chick peas (10 per cent), defatted soy flour (18 per cent) dried skim milk (5 per cent), sugar, iodized salt (9 per cent) and additional vitamins and minerals supplements (1 per cent).

e) Likuni Phala of Malawi is manufactured locally based totally on local dietary inputs and is composed of 50 per cent degermed maize meal, 25 per cent white bean flour and 25 per cent groundnut flour.

f) Pronutro variants and other products manufactured locally in Zimbabwe for feeding babies and children of various ages:

i) MAHEWU an instant product using maize and soya groundnut for protein fortification and designed to be used as a basis for school feeding programmes.

ii) Pronutro variants: Pré-cooked baby cereals in different flavours and prepared according to different formulas containing heat treated wheat flour and/or maize flour, roasted and/or defatted soya flour, milk solids, malt extract, sugar, supplementary amino acids, vitamins and minerals.

X. CASE STUDIES IN SELECTED COUNTRIES

A. Ethiopia

1. Health and nutrition status

Various studies undertaken particularly since 1958 have indicated that nutritional defficiency (especially protein-energy malnutrition) is a major contributor to health problems throughout Ethiopia. Mothers and children constitute the largest section of the population and are the most vulnerable. Among the children most affected are the one to four years olds, of whom 2 per cent suffer from kwashiorker, 4 per cent from marasmus and 30 per cent are underweight. Available information also indicates that, for the nation as a whole, infant, child and maternal mortality rates are 155 per 1000 (0.25 million infant deaths per year), 240 per 1000 (0.5 million child deaths per year) and 20 per 1000 (30 000 maternal deaths per year) respectively.

2. Basic policies and programmes

The need for effective policies and programmes for improving feeding practices of children particularly in the range of 6 months to one year was recognized as far back as 1959 based on a major nutrition status survey carried out by a United States - Ethiopian Government - sponsored study group in 1958.

Although various nutrition-related activities have been going on since then the Government remained unable to integrate and co-ordinate them within the framework of an over-all national food and nutrition policy. It was through lack of such basic policy orientation that both the Interministerial Nutrition Board created some 20 years ago and the Nutrition Department of the Ministry of Health established with WHO assistance in 1965 failed to survive.

A major Ethio-Swedish collaborative undertaking in nutrition which originated in 1962 and still continues to be active is the Ethiopian Nutrition Institute (ENI). Originally established under the name of "Children's Nutrition Unit" (CNU) ENI has been able to function as the country's principal instrument for initiating and applying nutrition programmes while focusing on the following main activities:

a) Surveys on the incidence of malnutrition in selected groups of Ethiopian children;

b) Detailed analyses (chemical and biological) of the food consumed in the families under study;

c) Enrichment programme with special emphasis on available indigenous foodstuffs;

d) Evaluation of physical fitness in relation to nutritional status in school age children and adults;

e) Participation in nutrition teaching on various levels with the aim of disseminating knowledge about nutrition to professionals and the public.

Since its establishment in 1962 CNU was able to collect a lot of baseline data (including its success in drawing the country's first Food composition table) identify major nutrition problems and develop a low-cost high protein weaning food (Faffa).

In 1968 the name CNU was changed to ENI. In 1974, the Institutes activities were integrated with those of the Ministry of Health with the aim of putting ENI in a better position to influence nutritional development at the national level. It appears that further progress in this direction is just being achieved in view of the Government's recent decision to establish a multidisciplinary inter-ministerial nutrition commission in which ENI is to serve as secretariat with the aim of developing a national nutrition programme.

3. Activities of infant formula TNCs and their regulation

Of the four selected African countries visited during the present mission it is in Ethiopia that the infant formula TNCs appear to be most active in terms of the number of firms competing in the marketing of breast milk substitute products and the proliferation of brand varieties. A major study undertaken during 1975-1976 3/ has shown that the range of infant formula products (excluding other milk-based products) placed on the market by 24 pharmaceutical and infant formula TNCs based in the United States, Europe and Japan had grown to 23 in 1976.

3/ WHO Collaborative Study on Breast-feeding, AFCH/79.3, WHO/UNICEF Joint Meeting on Infant and Young Child Feeding, Geneva, 9/12 October 1979.

While the total quantity and sales volumes of such products during the same year was estimated to amount to 300 tons and $1.3 million, the estimated share of the largest TNC, two largest TNCs, three largest TNCs and four largest TNCs was 40 per cent, 65 per cent, 85 per cent and 95 per cent respectively. The plentiful supply of feeding bottles on the market as well as the free distribution of samples through health services observed at that time appears to be a regular feature of infant formula marketing practices even to this day.

As was observed in the case of the other countries visited, the outreach of the infant formula market in Ethiopia appears to be scattered, the main concentration remaining in urban areas with Addis Ababa being by far the largest market in the country. However, there was no evidence to show that this trend is an outcome of TNC policy for market segmentation in recognition of various needs of different socio-economic population groups.

While the present mission was unable to observe any evidence of TNC studies on possible adverse effects of bottle feeding or the existence of an established system for monitoring such adverse effects in Ethiopia there was a good indication that such TNCs are beginning to respond positively to continued pressures imposed on them by the international community to adopt and apply acceptable codes of marketing conduct. This was made evident by the fact that infant formula advertising using the mass media has now ceased and all such products are now labelled with information indicating the superiority of breast-feeding and the dangers arising from inappropriate use of bottle-fed breast-milk substitute products.

4. Distribution system

For the most part, products of the infant formula TNCs are imported and distributed through a number of large-scale local distributors under special agreements with suppliers. While pharmaceuticals are subject prior to registration by the Ministry of Health under special legislation and their wholesale and retail sale regulated under the same law, the same does not apply in the case of infant formula products. Under such circumstances there is nothing to restrict the proliferation of "me-too" brand products and all possible retail outlets are being used including general food stores, pharmacies, rural drug vendor shops, kiosks and other open market avenues.

Personal sales being an important aspect of market growth, the infant formula industry's sales representatives and supervisors cover both the public and private markets through regular visits with the basic objective of pushing products aggressively. Although advertising using the mass media (the press, radio, television, the cinema) has ceased, sales promotion through distribution of samples, gifts, booklets and pamphlets still goes on.

5. Government policy

The present mission was not able to obtain any tangible evidence of the existence of an over-all national food and nutrition policy allowing the integrated development of the country's nutrition and related activities. Accordingly, all current applied nutrition programmes running under various government ministries and agencies, including those operating under the Ministry of Health (ENI, Gondar Public Health College MCH Services), Ministry of Education and Ministry of

Industry (Food Corporation and its affiliate the Faffa Foods Plant), etc., still appear to function in an insufficiently co-ordinated manner. The country is yet to establish, in particular, an appropriate national code of marketing practices to serve as an instrument for regulating the activities of the infant formula industry.

However, although it was not possible to obtain published information, discussion with the ENI have indicated that the Government's current policy orientation is to establish the necessary measures for meeting the country's nutrition problems. Accordingly, a recently established interministerial body is said to be charged with the responsibility of initiating policies and executing programmes through co-ordination of all sectoral activities with ENI serving as its secretariat. The Institute is also being made to play a key role in a technical committee that has recently been established to oversee the activities of the Faffa Foods Plant.

Apparently, these measures are indicative of the Government's intention of giving ENI the necessary support and encouragement in recognition of the Institutes achievements and of strengthening its capability for assuming leadership in the country's future applied nutrition programmes.

Consequently and in line with its past efforts to contribute towards the establishment of a national food and nutrition policy in general and promotion of appropriate infant and young child feeding practices in particular, including the enactment of a national code governing the marketing and promotion of infant formula products, the Institute was able to organize a four-day national workshop from 8 to 11 May 1981, the outcome of which could not be presented in this report due to lack of adequate information during the course of the present mission including the preparation of this report.

6. Development and production of weaning foods

Based on the continued research efforts of the CNU since its establishment in 1962 a number of low-cost supplementary food mixtures of high energy and protein content based mainly on indigenous foodstuffs have been developed and tested with the aim of using them as supplementary weaning foods, particularly during the critical age period of six months to 4 years. "Faffa", first launched in 1967 by ENI, has been found the most successful so far and is now produced on a large scale in a State-owned factory - the Faffa Foods Plant, Located in Addis Ababa.

Although Faffa is sold through the ordinary market as well as distributed in feeding programmes, its promotion is combined with nutrition and health education, with particular emphasis on home-made weaning foods since, as is usually the case with such industrially processed foods, Faffa still reaches only a fraction of the needy population and the rest need to receive adequate information concerning the proper use of available staples.

The Faffa Food Plant, operating under the Ministry of Industry (through the Ethiopian Food Corporation) has a designed capacity of 12 000 tens/year but currently runs at only 72.5 per cent of that capacity. The range of products processed are presented in table 3 below.

Table 3. Range of products manufactured by the Faffa Foods Plant (1980-1981)

Product	Ingredients	Protein (percentage)	Calories	Consumer target
Faffa	wheat - 57% chick peas - 10% soy flour (defatted)-18% D.S.M. - 5% sugar + iodized salt- 9% vitamins + minerals - 1%	21.2	340	Children - 4 months to 5 years
Dube	wheat flour enriched with vitamins and minerals	13.2	350	Under nourshed adults including lactating mothers and grown up children
Meten (pre-cooked)		17.0	365	Children aged 4 months to 5 years
Edget	powdered milk	19.0	450	The family including children - not designed as a breast milk substitute
Shiro	roasted pea flour with iodized salt	-	-	Household consumption

Source: "The Faffa programme: Fulfilment of objectives": a report submitted to the Government by the Technical Committee the activities of the Faffa Food Plant; 10 October 1980.

Based on a total capacity of 6 000 ton/year available for Faffa production the factory's output covering its entire range of products for 1977-1978 to 1979-1980 is indicated in table 4 below.

Table 4. Production in tons 1977-1978 to 1979-1980

Product	1977-78	1978-79		1979-80	
	Actual	Target	Actual	Target	Actual
Faffa - bulk	1 022.14	3 557.0	2 037.75	2 500.0	3 459.65
Faffa Commercial	449.30	839.0	425.3	2 000.0	529.68
Dube	105.99	2 390.0	1 273.65	3 500.0	3 235.73
Ethio-Milk	86.72	174.0	218.57	234.0	-
Edget (canned)	-	215.0	55.28	234.0	63.13
Meten pre-cooked	-	175.0	52.6	234.0	10,49
Shiro	-	-	-	-	154.95
Total (tonnes)	1 664.15	7 400.0	4 063.21	8 702.0	7 453.69

Source: Ibid

7. Distribution

Three types of distribution channels are used namely, the commercial, institutional and relief outlets. Within the commercial channel, the factory distributes its products through eight sales regions established in various parts of the country. Two of these are operating through commission agents and five more similar outlets are in the process of being established.

Additional information on the amount of Faffa and other products distributed through the said three channels is given in tables 5, 6 and 7 below.

Table 5. Distribution of Faffa and other products through commercial channels 1979 - 1980

Branch centres	Regions	Quantity kgs	Total sales Birr
Addis Ababa	Central	1 553 245.0	1 763 651.60
Mekele - Bahir-Dar	Northern	669 041.0	859 580.00
Awassa	Southern	486 420.0	245 770.50
Jimma	Western	665 523.0	746 683.20
Dire-Dawa	Eastern	246 491.0	296 853.00
Total		3 320 725.0	3 912 543.30

Table 6. Institutional channels, Faffa only

Agency	Quantity kgs	Value Birr
Ministry of Health	64 840.0	69 857.72
Municipality of Addis Ababa	74 550.0	80 943.10
All Mission Groups operating in Ethiopia (UNICEF supported)	1 260 600.0	1 386 660.00
Total	1 399 990.0	1 537 460.82

Table 7. Faffa and Dube through relief and emergency channels 1979-1980

Agency	Quantity Kg.	Value (Birr)	Products
Relief & Rehabilitation Commission & UNICEF	1 302 200.0	1 429 990.10	All Faffa
CFPI *	187 460.0	192 444.00	Shiro & others
OXFAM	98 000.0	107 800.00	All Faffa
International Committee of the Red Cross	1 080 000.0	1 016 163.81	Largely Dube
Christian Relief Development Association	88 000.0	96 800.00	All Faffa
Total	3 019 520.0	3 107 158.11	

Source: Ibid

Source: Ibid.

* Central Food Processing Enterprise.

As far as distribution is concerned the institutional and relief and emergency channels appear at least for the immediate future to be the best avenues for reaching the nutritionally vulnerable, destitute or low-income majority who are not able to buy Faffa. But in the long run the real value of the Faffa production and feeding programme must be judged in terms of its contribution in educating the nutritionally vulnerable majority to feed themselves with an appropriate combination of local foods without having to depend on handouts of industrially processed products.

B. Malawi

1. Basic policies

The Government of Malawi envisages that the long-term solution to the country's nutritional problems lies in agricultural development and nutrition education and the short term solution in specific intervention programmes. The Government's over-all policy is to ensure satisfactory nutritional status and food security for all, with particular reference to the small holder farming families. The National Rural Development Programme (NRDP) is the main channel for nutrition improvement programmes to reach the rural population by:

(a) Raising rural incomes;

(b) Increasing awareness of the importance of proper feeding;

(c) Increasing and diversifying food production;

(d) Improving water supplies and health services;

(e) Provision of the necessary infrastructures;

(f) Improving the utilization of resources through education and training.

The Ministry of Agriculture, which has the task of co-ordinating all contributory activities to the National Food and Nutrition Programme (NFNP) began discharging its responsibilities in 1979 but failed to develop a detailed programme strategy.

Malawi has in fact, to date, no adequately comprehensive national programme for the effective co-ordination and integration of all nutrition and related activities, including regulation of TNC infant formula marketing and promotion activities as well as programmes for the development and effective use of appropriate local weaning foods processed at both the household and the industrial level. Although some effort had been made in this direction, particularly since 1973, using external assistance (obtained from WHO, Freedom From Hunger Campaign of the United Kingdom, etc.) to develop a National Food and Nutrition Programme, no substancial progress has yet been achieved.

2. Nutrition programmes in the Ministry of Agriculture and Natural Resources

The Ministry is currently engaged in pursuing the following main nutrition related activities:

(a) A national sample survey in agriculture containing a nutrition module is being undertaken aimed at arriving at a profile analysis of those rural households which are most nutritionally at risk;

(b) An FAO developed training pack in food and nutrition for field programme management is being undertaken with agricultural extension workers with the aim of introducing the revised pack in all agricultural training programmes;

(c) A Nutrition Studies Unit has been established in the Bunda College of Agriculture which is also responsible for the nutrition component in all training courses leading to a diploma or degree in agriculture.

3. Nutrition activities in the Ministry of Education

Nutrition is included in the curricula of primary schools under health education. Elaborate home economics programmes, also giving attention to cooking classes for female students, have been established in most of the 41 secondary schools in the country.

4. Ministry of Community Development

The Ministry trains two levels of extension workers who are concerned with applied nutrition programmes: community development assistants and home craft workers. Both courses cover aspects of home economics and nutrition, training of local leaders, adult literacy, technical skills, etc.

5. Nutrition programmes in the Ministry of Health

Current activities under the Ministry's MCH programmes include nutrition status surveillance, nutrition education and training with particular emphasis on promotion of breast-feeding and appropriate weaning practices. Supplementary food is provided to nutrition risk patients in clinics, rehabilitation centres and hospitals through the WFP assisted project MLW/525. The food package consists of CMS, DSM, DWM, Likuni Phala, tinned fish, vegetable oil and maize flour 4/ supplied in various combinations to different categories of patients. Twenty four rehabilitation centres are in operation at present. However, it is the policy of the Government to limit the number of such centres in order for them not to appear as mere feeding centres and so lose the educational emphasis which they should have.

4/ CSM = Corn Soya milk
DSM = Dried Skim Milk
DWM = Dried Whole Milk

6. Nutrition status 5/

Surveillance of nutrition status undertaken through the health services indicates that under nourshment and malnutrition in 0 to 3 years age groups are the major causes of morbidity and mortality throughout the country. Routine health statistics also indicate that poor environmental hygiene and sanitation in general and incidence of bilharzia, malaria, hookworm and other helminths adversely affect nutrition status. In children 0 to 4 years malaria is by far the biggest reported cause of morbidity followed by respiratory and diarrhoeal disease. It is not however possible to give a precise assessment of how widespread and severe these problems are because:

(a) No nationally representative nutrition status survey has ever been undertaken;

(b) A representative surveillance system for Malawi does not exist;

(c) The attendance rate of children at MCH services rapidly declines in age groups above 1 year.

According to present estimations, prolonged breast-feeding is practised by most rural mothers and the use of commercial breast milk substitutes in infant feeding is still a minor problem. A child is usually breast-fed for a minimum of 18 months unless the mother has physiological or clinical problems in breast-feeding her baby. Some working urban mothers may adopt artificial feeding methods but they are considered to represent only a small minority of mothers at present. This practice is nevertheless discouraged through the Ministry of Health's current programmes for promoting appropriate infant and young child feeding practices.

For want of readily available information it was not possible to obtain a precise assessment of TNC infant formula marketing and promotion activities and their impacts. The infant formula industry's very limited activities in Malawi in which only two TNCs (Nestlè and Wyeth) are involved in catering for a small urban market even in the absence of regulatory control of food imports may be attributed to lack of opportunities for market expansion and the Ministry of Health's determined efforts to promote appropriate infant and young child feeding practices including promotion of breast-feeding through all various available means.

Such efforts, coupled with continuous pressures imposed by the international community on the infant formula industry urging it to take a more responsible position in its marketing and promotion policies and practices in developing countries have succeeded in curtailing formula advertisement to the public, withdrawal of milk nurses (actually since 1975) and ensurance that all infant formula products carry appropriate information on their packages indicating the superiority of breast milk and the dangers arising from improper use of bottle-fed breast milk substitutes.

5/ Based on:

1) The present mission's discussions with officers and professionals of the Ministries of Health and Agriculture, World Food Programme Office and others.

2) Report of the Consultancy on Nutrition for Malawi, 16/1/80 to 21/2/80, Dr. J. Kreysler, WHO Nutrition Consultant.

3) Report of the WHO/UNDP Inter-country Nutrition Workshop ICP/NUT/002, Gaborone, 17-21 November 1980.

7. Weaning food production and use

Likuni Phala is the name given to a locally produced infant weaning and child feeding food made from an uncooked mixture consisting of 50 per cent degermed maize meal, 25 per cent white bean flour and 25 per cent groundnut flour and in which 100 grammes of the product contains the following nutrients:

Protein	=	17,5 grammes
Cals	=	412

Likuni Phala, produced by a local commercial firm (Grain Milling) obtained its first official approval by the Government in 1972. After having been publicised and demonstrated widely in hospitals and clinics in urban and rural areas an attempt was made to place the product on the commercial market in October 1973 at the request of the World Food Programme office in Malawi.

As a result of the overwhelmingly good response to it Likuni Phala has been introduced as a partial replacement of imported CSM in supplementary feeding programmes including its use as a treatment of malnourished children in clinics, nutrition rehabilitation centres and hospitals. It is also given to pregnant and lactating mothers and used as a means to educate mothers on good nutrition through cooking demonstrations in the clinics and hospitals.

8. Price comparisons: Likuni Phala versus imported commercial weaning foods

Likuni Phala has not yet been placed on the commercial market. However, its price in Malawi's supplementary feeding programmes at about 30 United States cents per Kg. compares favourably with the retail prices of imported commercial weaning foods.

A quick survey at the department stores in Lilongwe has provided the following figures for imported products (table 8).

Table 8: Price comparisons: TNC products versus Likuni Phala

Product	Firm	Protein content (percentage)	Price per kg. ($US)	Price differential (percentage)
Farleys	Glaxo	6.5	4.95	1 550
Farlane	Glaxo	25.0	4.62	1 440
Nestum	Nestlè	12.5	2.20	630
Cerelac	Nestlè	11.5	2.70	800
Likuni Phala	Local firm	17.5	0.30	100

The price differentials ranging from 630 to 1,550 per cent show clearly that these imported products are addressed only to the few well to do. However, one must also bear in mind the fact that aggressive promotion of such products by TNCs will, if not checked appropriately, pose the usual danger of attracting low-income groups as well with all the lamentable results, including depletion of the already low family income, insufficient quantities administered to the needy vulnerable groups with the illusion of better feeding, etc.

9. Likuni Phala: Difficulties and opportunities

In evaluating the performance of "Project Malawi 525 Feeding in Educational and Public Health Centres" the WFP/FAO/WHO/UNESCO Mission of May 1976 thought that the production of a Likuni Phala type of a food mixture based on locally available crops appeared to offer the most significant avenue by which the Government and local communities might effectively help vulnerable groups.

Yet, in spite of the fact that Malawi is displaying significant problems of malnutrition while being by no means short of food supplies and in spite of its success in having developed a relatively low-cost weaning food, Likuni Phala is still not available in sufficient quantities to meet the country's needs. Although the local industry's output of Likuni Phala is currently used in supplementary feeding programmes, international welfare agencies, including WFP are still supplying substantial quantities of foods at very high costs. 7/

The main problems faced in Likuni Phals production may be characterized as follows:

(a) Short shelf-life. The product in plastic bags has been found to deteriorate after a maximum of four months after delivery at cooler areas and within four to six weeks at warmer places;

(b) Milling problems. Production based on one mill for the whole country could not meet over-all demand for Likuni Phala;

(c) Lack of on-site quality control facility to ensure observance of good manufacturing practices in general and controlling afflatoxin level;

(d) Fluctuations in supply of raw material inputs for production.

In order to meet existing obstacles and to enhance future opportunities for Likuni Phala it is worth giving priority attention to the need for:

(a) Adequate research on demand for and consumption of Likuni Phala;

(b) More appropriate formulation and packing to improve digestibility, shelf-life, afflatoxin levels as well as the nutritive value of Likuni Phala (e.g. inclusion of additional mineral and vitamin supplements);

(c) Improved co-ordination of efforts between the grain milling process and the agricultural devel pment and marketing corporation (ADMARC), i.e. supplies of raw materials for grain milling, to ensure an adequate reserve of good quality ingredients throughout the year;

(d) Increasing the production of Likuni Phala with the aim of replacing costly imported foods, including those supplied by international welfare agencies and for attaining self-sufficiency in meeting the needs of nutritionally vulnerable groups with a low cost locally produced weaning food;

(e) Establishing an adequate distribution system to ensure that supplies reach their destinations in due time and in sufficient quantities;

(f) Providing hand operated mills for the production of Phala flour in villages, as opposed to using local private mills;

(g) Training all persons working in the field to ensure their ability to teach mothers proper nutrition and appropriate production and use of weaning foods.

C. Botswana

1. Basic policies

Botswana's problem is, as is the case with most of the other African developing countries, to devise a strategy that will effectively break the cycle whereby poverty brings poor health and poor health accentuates poverty.

According to the country's national development plan (1979-1985), major contributing factors are:

(a) The country's inability to meet over-all demand for staple food crops through local production;

(b) Recurrent drought which in 1979-1980 raised the country's sorghum/maize staple crops deficit up to 95 per cent and that of vegetables to 80 per cent and led Botswana to depend highly on imports from South Africa;

(c) Insufficient and unclean water;

(d) Lack of proper sanitation;

(e) Poor housing;

(f) Lack of knowledge about nutrition and personal hygiene;

(g) Prevalence of a number of major preventable communicable diseases.

It is increasingly recognized that malnutrition is a major problem in Botswana, being the main cause of 4 per cent of deaths in hospitals, 8 per cent of deaths of children under five and a contributing factor in many other illnesses despite supplementary ration provisions to the most vulnerable groups in the population.

The plan incorporates the following objectives for meeting current nutrition and related problems:

(a) To reduce malnutrition and under nutrition in pre-school children by half (i.e. from its present level of 25-30 per cent to 12½ to 15 per cent);

(b) Reduction of diarrhoea in children attending out-patient departments from 30 per cent to 5-10 per cent through the provision of sufficient quantities of good quality water;

(c) Elimination of the contribution of measles to malnutrition by vaccinating all children;

(d) Production of good quality food crops and their distribution to the population at reasonable prices with the aim of eliminating chronic food shortages and their contribution to malnutrition;

(e) Expansion of national nutrition surveillance activities to community level;

(f) Teaching of sound food habits and practices to all citizens through an intensified nutrition education using village health committees, media, and a pragmatic nutrition education programme on all levels of the formal education system.

The Interministerial Food and Nutrition Committee, established under the Rural Development Unit of the Ministry of Finance and Development Planning to manage human relief during droughts, has been given the responsibility of developing a national food and nutrition policy. Accordingly, the Committee is to encourage and stimulate nutrition activities by key ministries and agencies as well as integrate and co-ordinate nutrition and related programmes. However, plans are yet to be put to practice rationally and effectively.

2. Current activities of different agencies

During the present five-year plan period, high priority is given to the arable lands development programme which aims at bringing national food demand and supply into balance in the early 1990s. Although Botswana is self-sufficient in meat production, not enough milk and dairy products are produced domestically. Food processing, with the exception of maize and sorghum milling, is in its infancy, most manufactured food being imported.

The responsibility for research in the area of food processing lies with the Ministry of Commerce and Industry. Although one area of interest has been local weaning food production, both village level and commercial, to replace WFP-supplied imported products, it is as yet to materialize.

The development of primary health care is given the highest priority in Botswana's current national development plan. The programme's nutrition component aims at maximum participation of the community and includes:

(a) Nutrition surveillance for pre-school children in all facilities;

(b) Supplementary feeding of vulnerable groups country-wide;

(c) Special clinics for malnourished pre-school children;

(d) Home visiting of households identified as nutrition risks;

(e) Referral systems for malnourished children;

(f) Direct feeding programme for malnutrition risk children at clinics, churches, community centres;

(g) Development of demonstration gardens at clinics and schools;

(h) Extension work in appropriate nutrition technology.

3. Infant and young child feeding practices: policies and regulations

Breast-feeding is prevalent throughout Botswana as made evident by the proportion of mothers breast-feeding their babies (about 55 per cent in rural areas). There is a tendency for urban mothers to curtail breast-feeding owing to employment and other reasons.

Maternity protection to promote breast-feeding is regulated by the Employment Act of 1963 which stipulates a minimum of six weeks' maternity leave after confinement and six weeks before upon presentation of medical certificate with 25 per cent of the normal wage during this time. The law also entitles the lactating mother to breast-feed her baby twice daily during working hours.

Available information indicates that breast milk supplements commenced between four to eight months. By tradition, early supplementary foods consist of soft poridge (maize/sorghum), cow's milk and meat soups. However, the widespread distribution of CSM (corn-soy milk) to vulnerable groups seems likely to have increased the tendency to utilize imported commercial products which are increasingly available country-wide. A feasibility study is in preparation, through the efforts of the Ministry of Health, for developing and producing domestically local resource based weaning foods. Appropriate weaning with home-made local weaning foods is being promoted through a widespread network of primary health care facilities using family welfare educators.

4. Regulation of formula promotion

As is the case with most developing countries in Africa, Botswana does not yet have any national code for regulating the importation and marketing of commercial infant formula products. Even so, TNC involvement in the marketing and promotion of commercial baby foods is relatively limited and its impacts on breast-feeding practices and infant nutrition status has not been sufficiently significant to raise enough concern for a call for action on a national scale.

As was observed in the case of Malawi, continuing pressures by the international community urging the infant formula industry to act more responsibly, particularly with regard to conditions in developing countries in its infant formula marketing policies and practices, coupled with the efforts

of the Ministry of Health to establish appropriate infant and young child feeding practices to restrict the country's existing small market for such products appear to be the crucial factors which have discouraged and will continue to discourage infant formula TNCs from playing a significant role in Botswana.

Such over-all efforts have, as observed by the present mission, brought about, even in the absence of a national code, the cessation of infant formula advertisement to the public (including distribution of samples), inaccessibility of health-care facilities to milk nurses and appropriate labelling of infant formula products indicating the superiority of breast milk and the dangers arising from misuse of such products.

According to regulatory measures applied by the Ministry of Health no TNC formula promoting personnel are allowed to address mothers or members of the public, but may meet with the Ministry of Health staff to pass on relevant information on their products. Distribution of samples is possible only at the request of the Ministry of Health.

Of the two South African based TNCs (Nestlè and Wyeth) currently involved in the marketing of breast-milk substitute and supplement brand products, Nestlè appears to play a dominant role in the private market, although it was not possible to obtain any information for use in assessing this situation precisely. The same firm also appears to have the upper hand in the public sector through its active participation in the health education programmes of the Ministry of Health, which has served to increase and strengthen its contacts with health personnel including private practitioners through whom it is able to promote its formula products.

5. Weaning foods

As indicated earlier Botswana is, except in the case of maize and sorghum milling, still largely dependent on South Africa for imports of all processed foods. While the availability of weaning foods for the private market (catering to the few well-to-do) is limited to highly priced TNC brand products CSM is also imported at high cost by the World Food Programme for use in Botswana's Supplementary Feeding Programmes of vulnerable groups.

In addition to its continued efforts to promote appropriate weaning practices through the preparation and use of local food mixtures at the home and community level, the Ministry of Health is in the process of preparing the ground for the development and industrial production of a local weaning food with the aim of using it as a replacement for WFP-supplied imported foods when the WFP project expires in 1982. The Ministry's initiative is awaiting the Government's response. 6/

6/ During the present mission's visit to Botswana, this consultant had the opportunity to witness Dr. Kreysler's (WHO Inter-country Nutrition Co-ordinator attached to the Nutrition Unit of the Ministry of Health) efforts to obtain the approval of various government ministries and agencies for the said Ministry of Health-initiated project. The proposed project was (at that time) just ready to be reviewed by Interministerial Food and Nutrition Committee.

D. Zimbabwe

1. Basic policies

Since the policy basis for nutrition and related programmes has not yet been revealed it was not possible to have a close look at it during the course of the present mission t Zimbabwe. The limited information that was made available at the time did indicate, however, that the Government's basic orientation is towards the adoption of the primary health care approach which includes a nutrition component aiming in particular at improving the nutrition and health status of mothers, infants and young children.

Although still facing a number of basic nutrition problems, Zimbabwe appears to have a more advanced level of development than most of the countries of the Eastern, Central and Southern African subregions whereby its relatively highly developed agro-industry has allowed it to achieve self-sufficiency in both raw and processed foods and enable it to export to neighbouring countries all of which, except Malawi, are still highly dependent on imports to meet their needs even for unprocessed staple foods.

2. Problem definition

Available informati n 7/ indicates that malnutrition is among the first five leading causes of morbidity and mortality and has been a socio-economic problem aggravated by food deficits affecting the large numbers f returning refugees and displaced persons.

While on the wh le children aged 1 to 5 years are found t be affected mainly by protein calorie malnutrition frequently accompanied by measles and gastro-enteritis, the problem is found t be acute in the rural and peri-urban population.

3. Proolem soluti n

The objectives and strategies a dopted by the Government to solve Zimbabwe's basic food and nutrition problems may be characterized briefly as follows:

(a) National nutrition surveillance to obtain baseline data on the nutrition status of the population;

(b) Provision of information on nutritional value of indigenous foods;

(c) Provision of subsidies on essential foods to ensure availability of basic foods to all those in need of them;

(d) Implementation of nutrition surveillance, in particular, in under-fives' clinics on a national scale;

7/ WHO/UNDP Inter-country Nutrition Workshop report; WHO/ICP/NUT/002 Gaborone, 17-21 November 1981.

(e) Training of extension workers especially for rural areas and small-holder farmers;

(f) Prom tion of appropriate weaning practices using local foods through education, including cooking demonstrations;

(g) Research on nutritional value of local foods.

Although the collaboration and co-operation of various ministries is sought in translating these aims into action programmes, Zimbabwe is yet to establish the appropriate mechanism for ensuring the effective integration and co-ordination of all nutrition-related activities in the context of an over-all national food and nutrition policy and in particular to enact legislation and regulations to cope with the actual and potential problems of inappropriate baby formula sales promotion.

4. Restrictions on inappropriate infant formula sales promotion

As in the case of Malawi and Botswana, continued pressure exerted on the infant formula industry by the international community coupled with the Ministry of Health's efforts in promoting breast-feeding and appropriate weaning practices seems to have served to restrict at least the obvious manifestations of inappropriate infant formula sales promotion, including direct advertisement to the public through the mass media, use of milk nurses and sale of breast-milk substitute products without the appearance on their packages of appropriate information indicating the superiority of breast milk and the dangers arising from improper use of such products.

5. Infant formula TNCs

Only two TNCs participate in the marketing of breast-milk substitute products - Nestlè and Wyeth. Wyeth enjoys only a very limited share of the local market and only through imports of its products. Nestlè is able to exercise a virtual monopoly of the market. All its products (including weaning foods and others) are manufactured in a local subsidiary plant (Food Specialities Ltd.).

Wyeth's limited capability in competing against Nestlè appears to be the result of government action in restricting the amount of foreign exchange for importing processed foods competing with those produced locally.

Information obtained at the Ministry of Health has indicated that Nestlè has been able to create a good image for itself through its active participation in the Ministry's health and nutrition education programmes in which the firm also gives donations of its infant formula products for use, as appropriate, by mothers coming t Ministry of Health and municipal MCH clinics.

An intriguing questi n which the present mission tried to answer was how much of this good image f Nestlè, with its donations of its breast-milk substitutes and supplement products, enhances its strength against efforts directed towards demarketing of commercial f rmula products. This consultant's

attempt to have a close look at the operations of its affiliate through a visit arranged by the MCH Unit of the Ministry of Health could not materialize because of lack of positive response from the firm. 8/

A quick survey of food stores in Harare showed that:

(a) Only Nestlè's infant formula products were seen on the shelves. None of Wyeth's competing products were available;

(b) While Nestlè's and Willards' (the leading domestic firm) processed foods, including weaning foods, dominated the shelves, a few ordinary products of some minor domestic firms were also seen. Willards has the largest variety and volume of products;

(c) No imported processed foods of any sort orbreast-milk substitute products manufactures by local firms were available.

6. Promotion of weaning foods

The main emphasis given under the Ministry of Health's current programme for promoting appropriate weaning foods is to:

(a) Teach the mother how to prepare nutritious food for her child using locally available foods;

(b) Teach the mother some skills, such as vegetable gardening;

(c) Bring under-fed and malnourished children to normal nutritional status by intensive residential and supervized feeding using weaning foods processed both in the home and on a domestic industrial level.

All f ods used in supplementary feeding centres are those locally produced and they are fed t children by means of cup and spoon. The various feeding points operating under the current programme cover undernourished children up to six years of age. Mothers are encouraged to attend feeding points regularly until the child's weight-for-age status reaches a satisfactory level.

While these feeding programmes emphasize on the use of maize, nuts, beans and oil, the use of the various weaning food products manufactures by the local industry is limited because of cost considerations.

7. The local industry and weaning foods

Only two private sector local firms (Nutresco and Willards) are engaged in the production of weaning foods. Both were visited. These two firms together manufacture more than 500 varieties f brand food products, including variants

8/ The consultant was informed discretely that the firm did not see the necessity of the proposed visit by a consultant representing a United Nations agency looking into the activities of TNCs.

of Pro Nutro and other weaning formulas targeted at infants and children of various ages (2 months and up), high protein biscuits, breakfast cereals, soup powders, diet formulas, pet foods, candies, various beverages, etc.

Of the total number of 26 branded food products manufactures by Nutresco the following are targeted at nutritionally vulnerable mothers and children:

(a) Nutresco H.P. Instant Beverage (18 per cent protein): a fermented non-alcholic beverage using maize and soya or groundnuts in different size packages and supplied to hospitals; 9/

(b) Nutresco 3 x N3 Special Mahewu (23.4 per cent protein);

(c) Nutresco Overnight Super Mahewu (14 per cent protein);

(d) Nutresco Orange Flavoured H.P. Instant (16 per cent protein);

(e) Cherish Baby Cereal (not instant) (20 per cent protein);

(f) Nutriplus (Pro Nutro variant), 25 per cent protein breakfast cereal.

The largest domestic food processing firm - Willards - owns 10 factories which together produce some 500 varieties of products, including a range of baby foods, excluding milk-based infant formulas, for all age groups. The main lines are indicated by the following products:

(a) Instant Nutrine: Baby's 1st Cereal 10/ (13.5 per cent protein, 365 K.J.) is based on wheat and defatted soya flours, sugar, lactose, malt extract, vitamins and minerals.

(b) Pro Nutro 1st Baby Cereal 11/ (15 per cent protein, 1,610 K.J.) is a pre-cooked formula based on heat-treated wheat flour, maize flour, roasted soya flour, milk solids, sucrose, malt extract, amino acids, vitamins and minerals. The final product is presented in six different flavours.

(c) Pro Nutro Instant Poridge (22 per cent protein, 1,683 K.J.) is one of various Pro Nutro variants formulated through the combination of 19 selected ingredients and presented in different flavours.

A quick look at the operation of Zimbabwe's two largest domestic food processing firms and the private sector market in Harare has indicated that Willards' greater capability in the application of good manufacturing practices, research and development and sales promotion efforts has allowed the firm to introduce the largest number of differentiated products on the market and to assume the greatest market share for processed foods excluding milk-based infant formulas whose market is dominated by Nestlé.

9/ The firm has started modifying the product's formulation through the use of defatted soya flour and addition of vitamins and sugar.

10/ Both Instant Nutrine and Pro Nutro products carry on their packages the picture of a contented mother and her well fed baby as well as sales promotion information indicating that each product can be mixed into a bottle-feed.

11/ Idem.

This superior capability of Willards is carried over to both actual and potential export markets for its products as is evident from the fact that, in spite of the constraints that had to be faced under the previous regime, the firm was able to export its products (as limited as they may be) to a number of neighbouring African countries, including Zambia, Malawi and Mozambique.

On the whole Zimbabwe's present capability in the development and production of processed foods in general and weaning foods in particular is unmatched by the developing countries of the Eastern, Central and Southern subregions, to say the least. However, Zimbabwe's industrially processed foods appear to be still beyond the reach of the nutritionally vulnerable low-income majority.

E. The United Republic of Cameroon

1. Nutrition status of children in the United Republic of Cameroon

The fact that chronic undernutrition appears to be a serious problem for children under 5 years of age in the United Republic of Cameroon and the need for national policies and programmes aimed at improving the nutritional status of such children were amply demonstrated by a national nutrition survey undertaken in 1977/78 through the combined efforts of the Cameroonian Government USAID and the University of California at Los Angeles. The findings of the said survey may be summarized as follows:

(a) Chronic undernutrition (Protein-calories malnutrition or PCM)

As indicated in table 9 22.1 per cent of young children under 5 years of age in the United Republic of Cameroon are chronically undernourished (height for age less than 90 per cent of the reference median value). This result is a reflexion of inadequate nutritional background, where a complex set of factors, including poor diet, ill health and other related socio-economic factors interact often insidiously. Approximately 16 per cent of the total population of the United Republic of Cameroon are children under 5 years of age. Based on the 1976 census results, the number of children in this group who are chronically undernourished is computed to be of the order of a quarter of a million. The survey has also indicated that the nutrition status of a special group of children in the same age range with a better socio-economic status approaches that of the population in the United States from which the reference data was compiled.

Table 9: Prevalence of undernutrition (in percentage)

Type of undernutrition	United Republic of Cameroon	Special Group	Liberia	Togo
Chronic undernutrition	22.1	4.2	19.4	19.6
Acute undernutrition	1.0	0.0		
Underweight	21.1	3.6		

Source: United Republic of Cameroon: National Nutrition Survey; October 1979.

(b) Acute undernutrition

Acute undernutrition does not appear to be a problem of national concern since its prevalence rate in young children was found to be low (1 percent) in all areas.

(c) Underweight

The prevalence of underweight in young children under 5 years of age in the United Republic of Cameroon was found to be 21.1 per cent. The result for rural areas was far greater than for urban (23 per cent as against 13.6 per cent). Other than the Douala special group, where the prevalence rate was 3.6 per cent Yaounde had the lowest prevalence rate, which was lowest in children aged 3 to 5 months began to increase after 6 months and reached a peak at 15 to 20 months, maintained a plateau throughout the second year of life and reduced slightly thereafter up to 59 months.

(d) Nutrition status of children in the United Republic of Cameroon by age

Table 10: Prevalence of undernutrition by age

Age in months	Percentage with chronic under-nutrition	Percentage with acute under-nutrition	Percentage underweight
3-5	7.3	0.9	10.0
6.8	8.4	1.2	16.4
9-11	10.3	1.6	25.7
12-14	10.2	0.3	24.9
15-17	16.9	1.2	28.7
18-20	24.1	3.6	28.8
21-23	28.5	0.5	26.3
24-29	22.3	1.4	22.9
30-35	24.5	0.8	18.6
36-47	27.4	0.9	19.9
48-59	26.8	0.5	20.8
Average:	22.1	1.0	21.1

Source: United Republic of Cameroon: National Nutrition Survey October 1979, p.74-75.

As indicated under table 10, results of the national nutrition survey show that children aged 3 to 5 months had the lowest prevalence of chronic undernutrition and underweight. The major contributing factor to adequate nutrition status in this age group of children is (as indicated under table 11) the fact that almost all of these children are breastfed and are therefore confered by protective maternal antibodies for resisting infection.

From 6 to 11 months, there was an increase in the proportion of children with chronic undernutrition and underweight. At this age, maternal antibodies being greatly reduced, the child becomes exposed to a more adverse environment, including poor sanitation with subsequent diarrhoeal conditions, infections, infestations and inadequate diet. The results for children aged two up to five years is mainly a reflexion of their past growth, nutritional and disease history.

(e) Infant feeding

(f) Breastfeeding (See table 11)

Almost all infants are breastfed up to 9 months of age. By 15 months, the proportion breastfed varies considerably throughout the country, being highest in the north, north-west and east provinces (90 per cent) and lowest in Yaoundé/Douala (52.4 per cent). Even by 21 months, breastfeeding is still common throughout all provinces (51 to 71 per cent) except the central south and Yaoundé/Douala (15 per cent).

Table 11: Breastfeeding prevalence by age (in percentage)

	Age in months			
	3-5	6-11	12-17	18-23
Yaoundé/Douala	95.1	87.2	52.4	13.7
Urban areas*	99.4	96.1	77.6	46.4
Rural areas	99.2	99.0	84.7	52.1
Total	99.0	97.8	83.1	49.8

Source: Ibid., p. 74-75

*Excluding Yaoundé/Douala

(g) Milk other than breastmilk

The consumption of fresh milk by young children was limited entirely to the north although the prevalence was low (6.7 to 7.6 per cent).

The urban influence with regard to the use of commercial infant foods including bottle feeding is indicated under tables 12 and 13. There appears little evidence of infant formula promotion (via posters, free samples, etc.) by transnational corporations outside the major urban centres. Bottle feeding appears to be most common in Yaounde/Douala and in the central south province and would undoubtedly expand further unless efforts are made to offset this trend.

Table 12: Percentage of children receiving breastmilk substitutes by age group

Area	Age in months			
	3-5	6-11	12-17	18-23
Yaoundé/Douala	23.4	25.4	11.7	7.7
Urban areas*	3.6	6.4	2.9	1.0
Rural areas	3.5	0.9	1.1	1.9
Total	4.7	3.1	2.0	2.5

Source: Ibid., page 152.

*Excluding Yaoundé/Douala

Table 13: Percentage of children being bottlefed by age group

Area	Age in months			
	3-5	6-11	12-17	18-23
Yaoundé/Douala	32.0	29.0	16.0	3.9
Urban areas	10.7	11.9	4.5	0.0
Rural areas	7.1	4.0	1.5	1.5
Total	8.8	6.4	2.6	1.5

Source: Ibid., p. 154.

(h) Supplementary feeding

Corn pap is the traditional weaning food in most provinces but is also shared by adults (especially the mother). Other traditional staples eaten by young children include cassava, plantains/bananas and millet/sorghum pap. Watery gruels using corn, rice and millet/sorghum are also given to the child. The proportion of children 6 to 11 months of age receiving such weaning foods has been estimated to vary from 8 to 34 per cent throughout various areas of the United Republic of Cameroon. Imported commercial weaning foods such as Cerelac of Nestle are most commonly eaten by about 30 per cent of young children aged 3 to 11 months in Yaoundé and Douala and rarely in rural areas. The proportion of children aged 6 months and beyond receiving such weaning foods even in Yaoundé and Douala does not exceed 10 per cent.

On the whole it appears that, while breastfeeding throughout the country is adequate, children in the critical 6 to 11 months age group in rural areas do not receive, along with breast milk, sufficient supplemental foods for ensuring normal growth, and this trend continues, although to a lesser extent, even in the second year of life.

(i) The infant formula industry's activities in the United Republic of Cameroon

A number of major transnational corporations, including Nestlé, Guigoz, Jaqueniaire, Abbot and Wyeth, were identified during the course of the present mission as being the most active in the promotion and sale of a variety of breastmilk substitute and weaning food products in the United Republic of Cameroon.

Promotional advertising and sale of such products is carried out in the absence of regulatory control. A quick survey of retail outlets of such products in Yaoundé, including pharmacies and general food stores, has shown that many infant formula and other products which should not be used as breast milk substitutes are labelled and marketed with utter disregard to acceptable codes of marketing conduct as made evident by the following observations:

(a) Breast milk substitute products whose outer container carries no information indicating the superiority and benefit of breast-feeding and the dangers arising from in appropriate use of bottlefed infant formula products;

(b) Breast milk supplement formulas, including ordinery powdered milk products with deceptive labels indicating that they could be used as breast milk substitutes;

(c) Point of sale advertising in which the picture of a supposedly healthy bottlefed baby using a particular brand of an infant formula product is displayed on large size posters together with the remark alledging that the formula serves as the "baby's second mother".

(j) Government policies and programmes

The National nutrition survey of 1977/78 undertaken in collaboration with the Ministries of Economy and Planning, Social Affairs, Health, Agriculture, Education, Defence and assistance of the University of California at Los Angeles, UNDP, UNICEF and WHO drew attention to the need for effective policies and programmes for improving feeding practices of children particularly in the age of 6 months to one year throughout the United Republic of Cameroon.

Considering the multiplicity of sectors involved in implementing an effective nutrition improvement strategy the survey stressed the need for effective co-ordination and integration of a wide variety of policies and programme activities. With this in view the survey recommended that a national structure be created for planning and co-ordinating all activities in the nutrition sector, that it should be composed of representatives from various sectors concerned with nutrition problems and that it should have a technical working group for implementing both short and long-term nutrition programmes.

However, the present mission was unable to obtain any evidence that the findings and recommendations of the national survey have been followed up. As it is, existing applied nutrition programmes, including those of the Ministry of Health, directed towards promotion of breastfeeding and appropriate weaning practices are still being undertaken in the absence of a national nutrition policy guide and without any mechanism for controlling the actual and potential problems arising from inappropriate promotion and marketing of commercial infant formula products - a practice which has already been seen to have some impact on infant and young child feeding practices in the urban areas.

F. Ivory Coast

1. Policy basis for economic development

The Ivory Coast pursues a free enterprise economy in which the private sector, including foreign investment, is encouraged to make an important contribution to development. Foreign investors are attracted by the country's political stability and the generous investment incentives offered by the Ivorian Government.

With its open policy, the Ivory Coast has permitted transnational corporations from the United States, the Federal Republic of Germany, Italy, Switzerland and other countries to be involved in many different areas of economic activity, including food processing with a subsector even extending to baby foods where Nestlé appears to maintain leadership in the marketing of both imported and domestically processed infant foods.

2. Food resources

The most important element of the Ivory Coast's economy is still agriculture which provides the largest portion of the nation's export earnings, with coffee, cocoa, palm oil, pineapples (both raw and processed) making the largest contribution.

However, in spite of efforts to achieve self-sufficiency in traditional staples such as maize, rice, millet/sorghum, plantains and cassava, the Ivory Coast has not yet freed itself from dependence on imports to meet deficits in domestic production of rice, wheat and maize, Similarly, the country's cattle, sheep, poultry and fish resources are yet to be fully developed to meet over all animal protein consumption requirements.

Accordingly, the Government has already taken various measures leading towards the achievement of self-sufficiency in domestic food production, including encouraging the establishment and strengthening of farmers co-operatives through various incentives (good credit facilities, freely donated fertilizers, etc.), as well as in promoting research activities for diversifying agricultural production in general and for cultivating various high-protein source leguminous crops in particular with the aim of incorporating them in traditional diets to improve the nutritional status of the community, particularly that of infants and young children.

3. Nutritional status

Although no survey has been undertaken,so far to determine nutrition status on a national scale, some limited studies made between 1974 and 1979 have indicated that there is a high prevalence of protein-calorie malnutrition among urban children under five years of age. While no data could be obtained to indicate the nutrition status of children in rural areas, the findings, coupled with the nation's infant mortality rate of 110 per 1,000, could be taken as an important evidence of over all nutritional defficiency.

4. Research activities

While a number of institutions are engaged in agronomical research none are involved in finding the root causes of and precise extent of undernutrition in the Ivory Coast. While neither the Ministry of Scientific and Technical Research nor existing academic institutions give adequate priority to nutrition research, other parastatal institutions such as SODEPALM, SODEFEL, SITT' etc. are mainly concerned with research in agricultural products destined for export.

5. Nutrition programmes

Responsibility for co-ordinating nutrition activities has with the "Comitè national pour l'alimentation et le dèveloppement (CNAD)". This national committee, made up representatives of various ministries, including agriculture, health, social affairs, women's affairs, and is also responsible for co-ordinating nutrition education activities. It appears however that the committee still lacks both organizational competence and the necessary collaboration of other ministries to allow it to contribute towards the establishment of effective nutrition policies and programmes. Consequently, applied nutrition programmes pursued by various bodies, including the Ministries of Health, Education, Women's Affairs, etc., still

continue to function without being properly co-ordinated. It also appears that such a situation has not allowed WHO and UNICEF to play an effective role in the establishment of basic nutrition policies and programmes.

6. Infant and young child feeding practices

The present mission could not obtain any basic data giving a comprehensive picture of infant and young child feeding practices in the Ivory Coast. The following brief summary of general trends is drawn based on interviews with officials and professional staff of various ministries in Abidjan:

(a) Prolonged breastfeeding, up to two years or more, is a common practice throughout rural areas;

(b) Unrestricted promotion and marketing of commerical milk based infant formula and weaning food products by transnational corporations has an important impact on infant and yound child feeding practices in urban areas as evidenced by thriving competition among a number of major foreign firms in the marketing of a variety of brand products including the domestic production of some brands;

(c) The use of fresh milk in feeding young children as a supplement to breastmilk is limited;

(d) Traditional staples are used to feed infants from the age of 3 months including maize, manioc, yam, rice, etc. which may be given in the form of gruels;

(e) A number of socio-economic factors including low purchasing power, food taboos and lack of knowledge about the nutrition needs of children in general continue to make many high protein source foods, such as fish, eggs and meat, beyond the reach of many children even when such foods are consumed by adults.

7. The infant formula industry's activities in the Ivory Coast

The Ivory Coast's free enterprise economy which encourages the participation of foreign investment has enabled transnational corporations to have an important impact on the country's economic development. This includes the infant formula industry which, in the absence of regulatory control, is able to engage itself actively in the promotion and marketing of a variety of commerical breast milk substitute and weaning food products. While Nestlé, Guigoz, Abbot, Wyeth and Jacquemaire seem to control the market for imported breast milk substitute products, Nestlé appears to have the largest market share for milk formulas including condensed/sweetened and evaporated milk products.

8. Weaning foods

The present mission was unable to find any evidence of serious efforts to move towards the development of appropriate weaning foods based on local foods either on a local or national level to meet the needs of the nutritionally vulnerable children throughout the country.

This situation appears to have allowed Nestlé virtually to monopolize the market (urban and rural) with a variety of differentiated weaning food formulas including those intended for feeding children suffering from Kwashiorkor, diarrhoea, etc.

A quick survey of pharmacies and food stories in Abidjan has shown that all weaning formula products, except cerelac are imported. Among them, the most popular appear to be:

(a) Nestum (based on cereals): intended for feeding children from the age of four months;

(b) Nisidina: a normal cereal based weaning formula;

(c) Cerelac: as Nisidina;

(d) L.A.D.: a special formula directed to children suffering from diarrhoea;

(e) A.L.110: a special formula directed to children suffering from kwashiorkor;

(f) Various low priced soup formulas ("cubes") directed towards low income families in which their promotion as additivies to traditional staples with the aim of enhancing the nutritive value of daily diets given to both adults and young children appears to be encouraged by the Ministry of Women's Affairs.

9. Concluding remarks

Some limited studies undertaken in 1974 and 1979 have indicated a high prevalence of protein-calorie malnutrition among urban children under 5 years of age. Inadequate weaning practices related to various socio-economic constraints including lack of knowledge about optimal nutrient needs of the growing child, inadequate income, insufficient availability of high protein source foods, particularly those of animal origin, aggravated further by food taboos, the Government's ineffectiveness in promoting adequate weaning practices through applied nutrition programmes, including the development and promotion of supplementary food formulas based on local foods, etc. are likely to extend this problem even to a more serious level among the Ivory Coast's rural population.

Undoubtedly there is a real need for assessing the root causes and extent of undernutrition among children through extensive studies undertaken on a national scale as a basis for developing effective policies and programmes, including the enactment of a national code to control inappropriate promotion of commercial baby foods by transnational corporations in general and to protect and promote breastfeeding practices in particular.

At the moment the most basic stumbling-block appears to be lack of awareness of these basic needs by the government authorities concerned. It is hoped that the present mission's dicussions of this subject with various ministry officials coupled with the findings and recommendations of the United Nations University Mission of March 1981 and the newly established International Code on the Marketing of Breast milk substitutes will be of some value.

F. Liberia

1. Food resources and feeding practices

Rice is by far the most important Liberian staple, being grown in over 90 per cent of the country's areas but it is still not produced sufficiently to meet over-all demand. There is also a limitation in the availability of animal protein source foods, particularly among young children given the country's small livestock population, under-utilization of inland fish potential and inappropriate feeding practices resulting from a lack of knowledge about the nutritive requirements of the growing children.

While rice is considered the big meal of the day in most regions, most tubers, such as cassava, yams, sweet potatoes, etc., may be used along with rice or in different meals depending on the food habits of the particular region. Vegetables are generally used as sauce for rice and corn is mostly used for gruels and paps. High protein source foods such as fish, eggs and meats are popular throughout Liberia but their high cost puts them beyond the reach of the majority of low-income families. Even when such foods are available the man of the house gets the highest priority in the daily family diet. The mother and children come next and share the food. When a special food is available to young children it may be limited to watery gruels and paps made from rice and/or corn.

2. The problem of undernutrition

The problem of undernutrition in Liberia has been demonstrated by various studies undertaken since 1948 and discussed at a number of conferences.12/ These studies have indicated that protein-calorie malnutrition and anemia are common particularly in young children, and this problem, while not adequately quantified, is associated with food availability, practices and taboos, morbidity and socio-economic status.

3. The extent of the nutrition problem

The prevalence of malnutrition and anemia in children under five years of age was investigated by a survey undertaken on a national scale in 1975/1976 and its findings may be summarized as follows:

12/ a) Nutrition in Liberia, West African Conference on Nutrition and Child Feeding (1968);
b) Report on Nutrition in Liberia, Country Report, Dag Hammarskjold Foundation, Uppsala, Sweden, 1972;
c) Protein-Calorie Malnutrition and Weaning Foods in Liberia, Seminar on Protein Problems with Particular Reference to Weaning Foods, Cairo, WHO, 1974.

(a) Chronic protein-calorie malnutrition (stunting) does present a problem in that 18 per cent of children under five years of age in rural Liberia had impaired growth. The prevalence of chronic PCM was higher in the agricultural areas (20.2 per cent) than in the more densely populated localities in rural Liberia (12.4 per cent) and Monrovia (8 per cent). Stunting begins around six months of age, increases to a plateau in the second year and continues at least until five years;

(b) While acute PCM was found to be relatively uncommon throughout Liberia the percentage of underweight children in rural areas was found to be 24;

(c) The prevalence rate for fat wasting in rural Liberia was 17.7 per cent and this is thought to be related to low calorie food intake and infection;

(d) The most important nutrition-related problem in young children in terms of numbers affected is anemia. At least 60 per cent of all children aged 6 to 59 months were anemic by WHO standards. This occurred throughout all age ranges and is reflected by the high prevalence of malaria, hookworm infestation and poor diet.

(e) Nutritional status: the percentage prevalence of malnutrition according to type, population described and age is summarized under table 14 and 15.

Table 14: Percentage prevalence of malnutrition by type of PCM and population for children aged 0 to 59 months

	Chronic PCM	Acute PCM	Under-weight	Arm wasting	Fat wasting
		(in percentages)			
Agricultural areas	20.2	1.6	25.5	12.0	18.0
Non-agricultural areas	12.4	1.5	20.1	7.7	16.9
Rural Liberia	18.0	1.6	24.0	10.8	17.7
Monrovia	8.0	1.5	19.3	9.9	30.5

Source: Liberia, National Nutrition Survey, 1976, p.65.

Table 15: Percentage prevalence of malnutrition according to type and age

Type of malnutrition	Age in months						
	0-1	2-5	6-11	12-23	24-35	36-47	48-59
Chronic PCM	12.1	7.0	12.5	22.3	21.1	20.5	24.7
Acute PCM (moderate to severe)	6.2	1.6	1.9	2.4	0.7	0.4	1.1
Underweight	26.1	17.4	34.8	31.1	20.8	17.4	19.3
Arm wasting	15.0	6.7	18.9	17.9	7.9	3.6	2.8
Fat wasting	27.1	11.0	27.5	31.1	9.4	6.9	7.2

Source: Ibid., p. 85.

4 Infant and young child feeding practices

The 1976 national nutrition survey has indicated that 93.8 per cent of all children in Liberia are breastfed up to the age of 6 months. This percentage decreases to 84.4 and 49.2 in children aged 6 to 11 months and 12 to 24 months respectively (table 16).

While 83.6 per cent of young children receive food other than milk, the proportion getting specially prepared food was about equal to those sharing food with the family. Between the ages of 12 to 24 months, only 8.6 per cent of children received special foods (table 17).

Table 16: Percentage distribution of milk feeding by age

Type of milk	0-5 months	6-11 months	12-24 months
Fully breastfed	93.8	84.4	49.2
Partly breastfed	2.6	4.6	14.3
Non-breastmilk only	2.6	7.6	4.8
No milk	1.0	3.4	31.7

Source: Ibid., p. 60.

Table 17: Percentage distribution of food presentation method by age

	0-5 months	6-11 months	12-24 months
Food specially prepared	32.6	40.9	8.6
Food shared with family	3.4	39.5	86.6
No food	53.9	16.4	3.5

Source: Ibid., p. 60.

It is important to note that 16.4 per cent of all rural children age 6 to 11 months received no food apart from milk. In the age group of 12 to 24 months the proportion of children receiving specially prepared foods was found to be 8.6 per cent while that of children sharing food with the family was 86.6 per cent. It appears that the child may have to compete on his own with other family members for food.

Food specially prepared for the child was found to be invariably rice water and pounded rice or, less often, cassava. The intake of animal protein source foods (meat, fish and eggs) was found too low and infrequent.

(5) Policies and programmes

The fact that Liberia is facing serious problems of under-nutrition particularly in children below the age of five years and that this problem is associated with food availability, practices and taboos, morbidity and socio-economic status was demonstrated by various studies including the national nutrition survey. The immediate response of the Government was essentially to reject the survey's findings and implications by refusing to accept the survey officially.

The first significant follow-up action was undertaken at a workshop on nutrition planning held in Monrovia in October 1980 with the aim of urging the Government to develop a coherent multisectoral nutrition plan for Liberia.

The workshop was able to prepare a draft four-year nutrition plan, its basic purpose being to (a) establish national nutrition goals; (b) identify strategies for reaching the goals; (c) identify resources for implementing the strategies, taking into consideration how present resources can be utilized more effectively and specifying what additional resources are needed.

The draft national nutrition plan for 1981-1984 had proposed an action programme covering a wide range of activities and recommended the establishment of an interministerial national nutrition board with the responsibility of:

(a) Co-ordinating all nutrition programmes in existence;
(b) Assessing and evaluating existing programmes;
(c) Co-ordinating and disseminating information through the mass media;
(d) Establishing co-operative relationships with similar regional and international bodies;
(e) Formulating policies, advising and educating policy-makers in the Government stressing, in particular, the need for immediate action in establishing adequate infant and young child feeding practices including protecting and promoting breastfeedin g practices, curtailing abusive promotion and marketing of commercial infant formula products and developing appropriate complementary and weaning foods based on local resources.

Yet, the Government still appears to be unable to establish any effective policies and programmes on a national scale as proposed above. The principal stumbling block appears to be lack of awareness of the gravity and implications of the country's nutrition problems by the Government's policy-makers.

(6) The infant formula industry's activities in Liberia

Liberia's market for industrially processed baby foods functions, as in the case of pharmaceuticals, in the absence of any regulatory control. Accordingly, it would appear that transnational corporations are free to exploit such a free-for-all open market to the extent of saturating it with a proliferation of their brand products.

In the absence of any readily available information the present mission made a quick survey of pharmacies and food stores to get a closer look at the market for such products and was able to note that only a limited number of major firms, home based in Switzerland and the United Kingdom, appear to control the market for both breast-milk substitute and weaning food products. These were Nestlé, Guigoz, Glaxo and Cow and Gate.

Although it was not possible to obtain data to compare the market strength of competing products it appears that Nestlé followed by Guigoz lead their competitors in the sale of milk-based infant formula products. Nestlé's baby cereal (Cerelac), sold in a variety of packet sizes, appears to be the most popular imported weaning formula and Glaxo has the largest number of different products on the market.

There is no restriction in retail outlets for all baby food products. Whereas breast-milk substitute products are carried only by pharmacies in the United Republic of Cameroon and the Ivory Coast, such items may be found in any pharmacy, food store or kiosk in Liberia.

All infant formula products, except those marketed by Glaxo, are labled with appropriate information indicating the superiority of

breastfeeding and the dangers arising from improper use of bottle-fed breast-milk substitute products. However, they all carry the picture of a healthy bottle-fed baby on their containers.

(7) Development and promotion of local weaning foods

The fact that undernutrition particularly in children from the age of 6 months onwards is a serious problem throughout Liberia had already been demonstrated by a national nutrition survey undertaken in 1976. The subsequent workshop on nutrition planning held in Monrovia in 1980 stressed the need for developing an adequately integrated and co-ordinated multisectoral programme for combating this national problem, including the development and promotion of low-cost weaning foods based on local resources but without any effective results so far.

Currently, the availability of complementary and weaning foods of adequate nutritive value to nutritionally vulnerable children is still limited to imported commercial products whose high cost makes them accessible only to the few urban well-to-do. At the same time the infant formula industry appears to take advantage of Liberia's incapability of developing and promoting local weaning foods by extending its weaning food market to lower-income nutritionally vulnerable groups by promoting cheaper sour formulas ("Maggi Cubes") to be used in enriching traditional staples given to both children and adults.

It is under such circumstances that the 1980 Workshop on Nutrition Planning recommended that these imported "Maggi Cubes" be fortified with iron and used in combating iron deficiency anemia in mothers and children.

G. Egypt

1. The nutrition problem: Studies and follow-up actions

The fact that malnutrition and anemia continue to pose problems of national concern has been demonstrated by various studies and discussed at many national and international seminars, conferences, symposia and workshops.

The latest nutrition status survey undertaken on preschoolers on a national level during the summer of 1978 and winter of 1980 confirmed the findings of previous studies indicating that chronic malnutrition and anemia continue to pose a serious problem particularly during the second and third year of life. The prevalence rates of chronic malnutrition and anemia in such children were found to be 21.2 per cent and 38.4 per cent respectively, while that of acute malnutrition was limited to 0.6 per cent. These prevalences were found to decrease with increasing urbanization and were higher during the summer when such children are also found to be affected by diarrhoea.

2. Definition of policies and priorities

The National Food and Nutrition Conference held in Cairo in 1976 was the first major effort towards examining Egypt's food and nutrition situation and defining policies and priorities allowing the Government to meet the country's nutrition problems with effectively co-ordinated multisectoral action programmes.

The Conference was organized under the leadership of the Ministry of Health with the active participation of all other concerned ministries, universities, research centres, public institutions and the United Nations through FAO, WHO, UNICEF and UNESCO. Its basic recommendations were that:

(a) A high-level national food and nutrition body be established with the responsibility of both initiating and implementing national food and nutrition policies and programmes;

(b) More attention be given to the promotion and protection of breastfeeding as well as the development of local weaning foods;

(c) More attention be given to controlling infectious diseases in preschool age children, especially summer diarrhoea and measles;

(d) In order to make basic foods available to all citizens, more attention be given to improving agricultural production, particularly high protein source foods, including legumes, oilseeds, fish and livestock;

(e) Nutrition education be extended to all citizens with emphasis on the correction of bad food habits using all possible media of communication including women's associations, community leaders, etc.;

(f) Efforts be made to introduce school feeding in all primary schools;

(g) Food and nutrition education be included in the curriculum at all schools to meet existing needs;

(h) The Food and Nutrition Institute Library be strengthened to allow it to function as a specialized national reference centre for information on nutrition;

(i) The National Nutrition Institute be made responsible for conducting surveys on food and nutrition on a national level, setting the different nutritional requirements of the population, preparing and up-dating food composition tables and encouraging and co-ordinating efforts in nutrition research and food production from non-agricultural sources;

(j) A national food and nutrition seminar be held every two years to follow up the execution of these recommendations and to review current situation.

3. Follow-up programmes

Meetings

- 1978: International Commission of Microbiological Specifications for Foods, held in Cairo, which led to the formation of a Sub-Commission embracing seven Middle-Eastern Arab countries, including Egypt.

- 1979: Workshop on Nutrition and Health in Egypt with Special Reference to Mothers and Children, held in Cairo under the auspices of the Egyptian Ministry of Health and USAID to Egypt.

- 1979: Seminar on Iron Deficiency Anemia, Cairo.

- 1979: Conference on Egyptian Child Health up to 1990, held in Cairo under the sponsorship of the Ministry of Health, UNICEF, UNFPA and USAID.

- 1980: Symposium on Scientific Problems of Nutrition in Egypt held in Cairo by the Committee on Nutrition Sciences under the sponsorship of the Academy of Scientific Research and Technology.

- 1981: Symposium on Breastfeeding held in Cairo under the sponsorship of the Ministry of Health.

4. Special food studies

A number of studies have been undertaken since 1978 in which the quality, acceptability and impact on nutrition status of various foods including weaning food mixtures both produced locally (Supramine types) and those coming under food aid programmes. A special study on infant feeding practices carried out in 1981 with the collaboration of WHO focused particular attention on urban and rural children under two years of age with the principal aim of evaluating home made foods for supplementation and weaning. The results of this study are not yet available.

Another important study in which the National Nutrition Institute has been involved since 1980 concerns itself with food consumption patterns of the Egyptian population based on a sample survey of 6,300 urban and rural families. The results of this study have not yet been made public.

5. Action programmes on health and nutrition

Egypt has been able to implement, particularly over the last few years, a chain of multisectoral activities with the aim of enhancing the health and nutrition status of children in particular, with the active collaboration and support of external bodies, including WHO, UNICEF, WFP, USAID and church organizations. These activities may be listed as follows:

(a) Expanded Programme of Immunization against six major preventable childhood diseases supported by WHO and UNICEF;

(b) Oral rehydration therapy programme supported by WHO and UNICEF;

(c) Promotion of breastfeeding practices through seminars and educational channels supported by WHO;

(d) Distribution of Supramine free through hospitals and MCH centres and at subsidized price through pharmacies with WFP, WHO and UNICEF support;

(e) The Maternal and Child Health Food Commodities Programme established in 1975 by the Ministry of Health with external support involved the free distribution of Supramine, Corn Soya Milk and vegetable oil to about one million beneficiaries in some 3,000 MCH units throughout Egypt.

(f) The School Lunch Programme for Primary and Secondary Schools established in 1977/78 by the Egyptian Government was supported financially by WFP and Catholic Relief Services to the extent of $100 million and 60 million respectively.

(g) The National Nutrition Education Programme for Pregnant and Lactating Mothers established by the Ministry of Health in 1979 covered 165 MCH and health centres in 13 governorates.

(h) Development of nutrition manpower at various levels of competence using external support obtained from the United Nations system and through bilateral arrangements, including:

(i) United Nations University followships for medical nutritionists on food and nutrition policy;
(ii) Six training courses for Egyptian doctors working in MCH centres, 20 doctors attending each course;
(iii) Four training courses for Egyptian nurses working in hospitals and MCH centres, 25 nurses attending each course.

This programme has also included training courses in nutrition given to primary health care workers, school feeding supervisors, agricultural extension workers, dieticians and community leaders.

6. Legislation and regulatory control measures

Egypt's efforts in setting up various multisectoral action programmes for enhancing the nutrition and health status of mothers and their children are complemented by appropriate legislation and regulatory control measures by which the Ministry of Health is responsible for regulating the promotion and marketing of all infant formula products. This involves pre-market screening and post-market surveillance of all such products, as is done in the case of pharmaceuticals.

Under this regulatory control scheme no product may be placed on the market without first fulfilling the Ministry's registration requirements relating to product composition, quality, labeling and price and obtaining the appropriate product registration certificate whose validity is limited to three years as compared to ten years in the case of pharmaceuticals.

At the same time, no infant formula or feeding bottle may be promoted to the public using the mass media and no home or health care facility may be used for the purpose of advertising or promoting infant formulas and this includes the use of milk nurses and samples or gifts.

Another important condition of the Ministry's product registration requirements is that no infant formula products may be imported except through the public sector channel established for this purpose by the Government and that retail outlets for such products be limited to licensed pharmacies where such products are to be sold only on the basis of justifiable need in consistence with the country's efforts for promoting and protecting breastfeeding practices and for avoiding improper use of bottle-fed breast-milk substitute products.

7. Maternity legislation

All female employees are given various maternity leave and benefits as specified by law (Law No. 47/1978, article 71). This includes a fully paid three months' leave after delivery and the right of a mother to be absent from her duties for a maximum period of one hour per day for one year to breastfeed her baby.

8. Infant formula companies

It was not possible to obtain any information for an adequately comprehensive profile on infant formula transnational corporations in Egypt.13/

13/ This constraint arose mainly due to poor programme arrangements which made it virtually impossible for this consultant to meet the right persons at the right place and at the right time.

However, a quick survey of infant formula and weaning food product retail outlets in Cairo (pharmacies and food shops), has indicated the presence of at least nine foreign firms including Nestlê, Abbot, Mead Johnson, Glaxo, Milupa A.G., Jacquemaire, Lijempf and A.S. Lidano.

Among these firms, Nestlê appears to be the most active in terms of supplying the infant formula market with the largest number of brand varieties followed by Lijempf of Holland and Abbot Laboratories of the United States. While Mead Johnson's (United States) and Nutricia's (The Netherlands) market entry appears to be limited to one product per firm none of Jacquemaire's (France), A.S. Ladano's (Denmark) and Milupa A.G.'s (Federal Republic of Germany) competing products were identified. The number of brand varieties marketed through the two types of retail outlets identified by the present mission's quick survey is indicated under the following table.

Table 18: Brand varieties by supplying firms and retail outlets

Firm and nationality	Pharmacies	Food stores	
	Breast-milk substitutes	High protein food formulas	Total
Nestlê (Switzerland)	3	1	4
Abbot (United States)	2	1	3
Lijempf (The Netherlands)	2	-	2
Mead Johnson (United States)	1	-	1
Nutricia (The Netherlands)	1	-	1
Glaxo (United Kingdom)	-	2	2
Jacquemaire (France)	-	4	4
A.S. Lidano (Denmark)	-	1	1
Milupa A.G. (Federal Republic of Germany)	-	1	1

While Nestlê, Glaxo and Jacquemaire are the principal competitors in the marketing of cereal-based weaning formulas, Jacquemaire has the largest number of brand varieties on the market. The market entry of Abbot, A.S. Lidano and Milupa A.G. seems to be limited to supplying specialized high-protein formula brands (one product per firm) for use in feeding children and adult patients suffering from diarrhoea and other conditions associated with malnutrition.

The only local weaning formula (Supramine) currently produced under government subsidy supported by WFP is yet to be successfully commercialized to compete favourably against imported equivalent products.

9. Impact of the infant formula industry's activities

As was observed in the case of all the other African countries visited so far, the impact of the infant formula industry's activities in the promotion and marketing of both breast-milk substitute and weaning food products on infant and young child feeding practices in Egypt is still not a problem of major concern at the national level. This is made evident by the following factors which continue to serve as major hindrances to infant formula market growth and extension:

(a) The high cost of imported commercial baby foods make all such products beyond the reach of the majority of low-income urban and rural families;

(b) A strongly entrenched tradition of breastfeeding exists among about 95 per cent of lactating mothers throughout Egypt;

(c) Intense pressures imposed on the infant formula industry by the international community resulted in the establishment of the International Code on the Marketing of Breast-milk Substitutes in May 1981;

(d) The Government has increased its efforts, particularly over the last few years, in developing effective policies and programmes for promoting appropriate infant and young child feeding practices.

10. Supramine: its development and impact

One of the main aims of the Egyptian Government's action programmes on nutrition has been the provision of a domestically produced low-cost protein rich food formula based on local resources for improving the dietary pattern and nutrition status of children, particularly those coming from the poorest section of the nutritionally vulnerable urban and rural population.

Accordingly, a project for producing Supramine, containing 26.6 per cent wheat flour, 10 per cent dried skim milk, 36 per cent chick peas, 17.4 per cent lentils, 9 per cent sugar and 1 per cent vitamins, minerals and flavours was initiated on 17 March 1973 by the Government in which WFP, FAO, UNICEF and WHO provided various forms of assistance. WFP supplied all wheat flour and dried skim milk ingredients up to 30 June 1979. The Ministry of Health was charged with implementing the project during and after the termination of WFP assistance. The Nile Pharmaceutical Company was entrusted with the responsibility of producing Supramine.

11. Project target and its implementation

The immediate target of the 1973/1979 Supramine production project was to manufacture during the first year 1,000 tons of Supramine and make it available on the market at low cost and for free distribution to the neediest groups through MCH centres and hospitals. This quantity was to be progressively increased to reach a total of about 13,250 tons over five years. However, real output/production during any one year between 1973/1979 has never exceeded 50 per cent of those figures.

A market survey made in 1979 revealed that Supramine was widely known, but this failed to lead to increased sales because of failure to meet various market conditions, including production output, distribution, taste preferences and commercial promotion requirements.

On the whole irregular production and distribution of Supramine has not yet allowed this nutritionally sound product to make a strong impact on the nutritional status of vulnerable targets . In addition to this, experience gained so far has shown that locally produced baby foods such as Supramine continue to face strong competition on the market from well established imported products.

However, this experience should not serve as a discouragement in reaching the ultimate objective of the Supramine project. Instead of developing another commercially oriented alternative to imported brand products, the Supramine project should lead towards self-reliance in terms of locally produced high-protein weaning foods at the family, community and national levels.