

## **SCN News, Number 08**



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# SCN News, Number 08

A periodic review of developments in international nutrition compiled from information available to the ACC/SCN

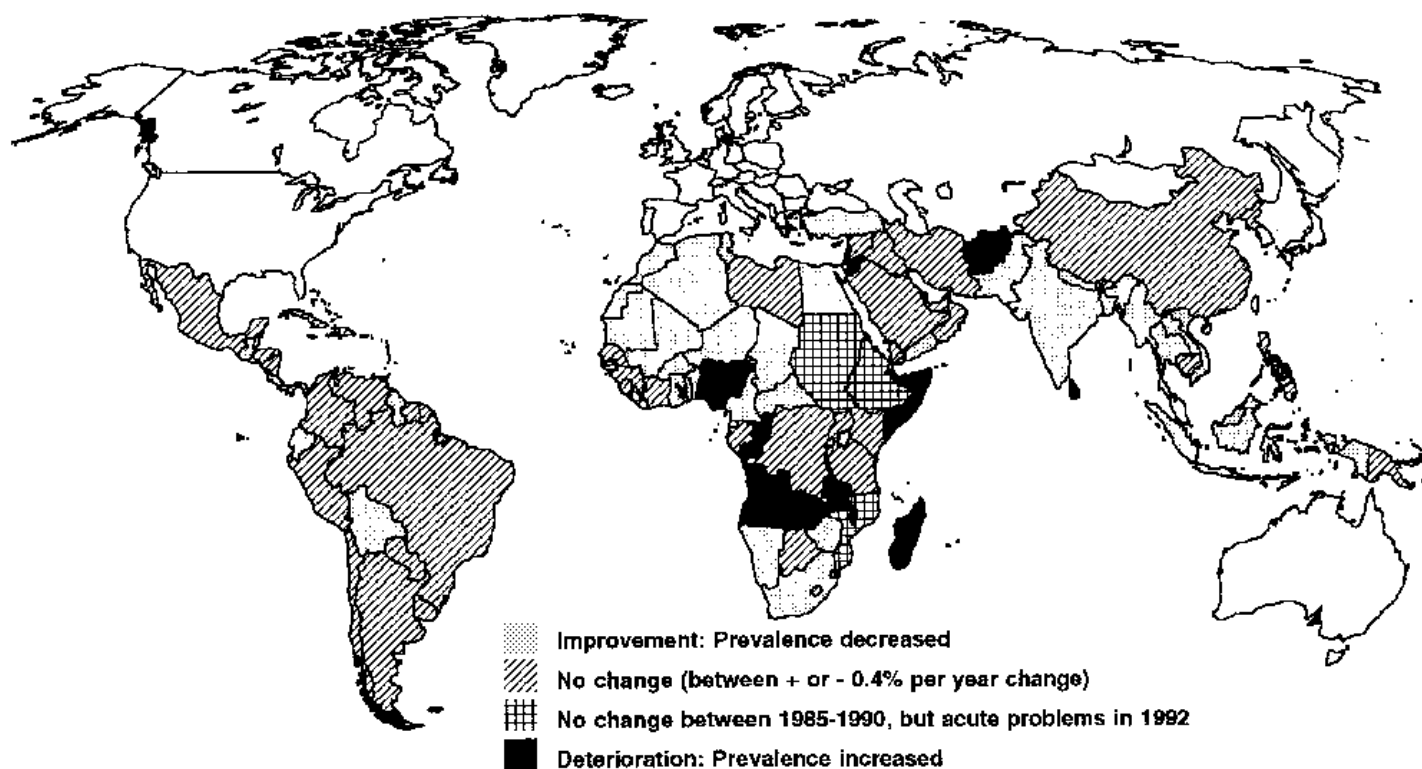
Number 8  
Late 1992

UNITED NATIONS



NATIONS UNIES

ADMINISTRATIVE COMMITTEE ON  
COORDINATION – SUBCOMMITTEE ON  
NUTRITION



*Changes in the prevalence of underweight preschool children from 1985 to 1990*

## Recent ACC/SCN publications

**Second Report on the World Nutrition Situation. Volume I: Global and Regional Results** (1992)

**Second Report on the World Nutrition Situation. Volume II: Country Data** (in press)

**Nutrition-Relevant Actions – Some Experience from the Eighties and Lessons for the Nineties** (1991)  
(SOA No. 10)

Book developed from the original background paper for ACC/SCN meeting on nutrition policy held in London in November 1990. Proposes a framework for the analysis of policies and programmes affecting nutrition, before reviewing experiences during the 1980s in several countries, and moving on to consider options for improving nutrition in the 1990s. Complements and expands on Supplement to SCN News No. 7 "Some Options for Improving Nutrition in the 1990s".

## **Nutrition and Population Links – Breastfeeding, Family Planning and Child Health (1992) (SOA No. 11)**

Report of symposium on “Nutrition and Population” held at the 18th Session of the ACC/SCN in New York in February 1991. Includes papers on the linkages between family planning and nutrition programmes, reproductive stress and women's nutrition, and breastfeeding, fertility and population growth.

## **Nutritional Issues in Food Aid (SOA No. 12) (forthcoming)**

Report of symposium on “Nutritional Issues in Food Aid” held at the 19th Session of the ACC/SCN in Rome, February 1992. Includes papers on the support of public works by food aid as a nutrition intervention, which age groups should be targeted for supplementary feeding, effects of supplementary feeding in the growth of children with infection, experiences of feeding programmes, and protecting refugees' nutrition with food aid.

**Copies of these publications can be obtained by writing to the ACC/SCN Secretariat. A charge of US \$10–\$20 per copy – price depending on size of volume and number of copies ordered (a discount is available) – will be made to those requesting from Australia, Europe, Japan, New Zealand, North America, to help cover costs.**

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SCN News is issued by the Secretariat of the UN ACC/Sub-Committee on Nutrition. We regret that only one issue of SCN News has been possible in 1992, but the usual frequency of twice yearly will be resumed in 1993.

Your contribution to future issues would be welcome. Please send us items for inclusion in “News and Views”, “Programme News” and/or “Publications”. Letters to the Editor for possible publication in future issues are also most welcome. SCN News aims to help the sharing of experience in nutrition.

If you wish to receive additional copies of SCN News, or would like to suggest other names to be added to our distribution list, please write to us.

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SCN News aims to provide information for those concerned with international nutrition. Publication of items in SCN News does not imply endorsement of views given, nor necessarily the official positions taken, by the ACC/SCN and its member agencies. The status of quotes and other material is generally indicated in the text and/or sources.

**We gratefully acknowledge funding assistance from the Netherlands for the preparation and printing of this issue of SCN News**

## **FEATURES**

### **Highlights of the World Nutrition Situation – Updated trends from SCN report**

*This is a summary of the findings in the recently published ACC/SCN Second Report on the World Nutrition Situation – Volume I. Global and Regional Results. This feature provides an all round overview of the current situation to be followed by more details in the next issue of SCN News.*

Malnutrition continues to affect large numbers of people, as summarized in the table below. An estimated 20%

of the population has inadequate food consumption. Growth failure affects one-third of children, and over 40% of women are underweight and/or anaemic. At least one billion people worldwide are probably affected by one or more nutritional deficiency.

### *Famine in Africa*

The period 1990–1992 marked one of the most severe times of food shortage and famine in Africa. Drought and war led to famine in Ethiopia, Somalia, and Sudan in the Horn of Africa, and in Mozambique and Liberia. These caused massive movements of refugees into neighbouring countries. However, the nutritional effects of the severe drought in many other parts of southern and eastern Africa were contained by government and external action.

### **Malnutrition in Developing Countries, 1975–1990**

	<i>Percent affected</i>			<i>Number (millions)</i>		
	1974–76		1988–90	1974–76		1988–90
<b>GENERAL MALNUTRITION</b>						
1. Population (all ages) with energy intake (kcal/caput/day) on average below 1.54 BMR over one year	33%		20%	976		786
	1975		1990	1975		1990
2. Children (under five years) with weight below –2 S.D. of reference	42%		34%	168		184
		1980s			1980s	
3. Women (15–49 years old) with weight below 45 kg		45%			400	
<b>MICRONUTRIENT MALNUTRITION</b>						
4. Anaemia: women (15–49 years old) haemoglobin <12 g/dl (non pregnant) or <11 g/dl (pregnant)		42%			370	
5. Iodine deficiency disorders (IDD) Goiter (all ages)		5.6%			211	
6. Vitamin A deficiency: children (under five years) with xerophthalmia		2.8%			13.8	

#### *Notes:*

1. Data on population with low energy intake (underfed) were calculated by FAO. The estimates are averages for 1974 to 1976 and 1988 to 1990.
2. Underweight children results are estimated by ACC/SCN, for children aged 0 through 60 months, using a cut-off of –2 S.D. of the median NCHS reference.
3. The estimate of underweight adult women is calculated from ACC/SCN's database on women's nutrition. The 45 kg cut-off is used as a basis for comparison, as (hat commonly reported. The prevalence estimates exclude pregnant and lactating women but these are included in the calculation of numbers.
4. Anaemia estimates are based on ACC/SCN's database on women's nutrition. The cut-off points for anaemia use the WHO reference for pregnant and non-pregnant women.
5. IDD estimates are based on WHO and ICCIDD data.
6. Vitamin A deficiency estimates are based on WHO data.

(Source: ACC/SCN (1992) Table 1.1, p. 2.)

### Children Underweight

Overall, the percentage of children underweight fell in the 1980s, from around 38% in 1980 to 34% in 1990 (see figure 1). The improvement was more rapid from 1975 to 1980, from 42% to 38%. This rate of improvement in the late 1970s was just enough to reduce the total numbers of pre-school children underweight, but these are estimated to have risen again in the 1980s, from around 164 million in 1980 to 184 million in 1990.

### Percent underweight children

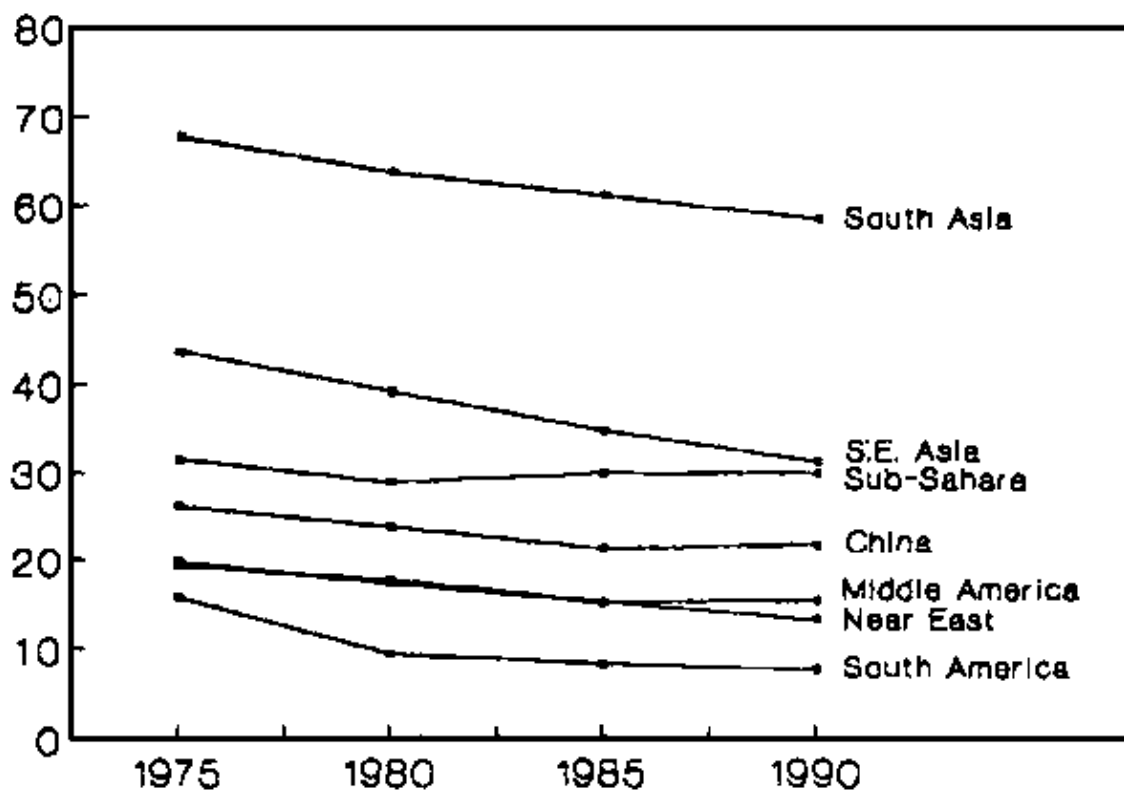


Figure 1. Trends in prevalence of underweight children, 1975–1990

(Source: ACC/SCN (1992) Figure 1.2, p.10)

### People Underfed

The proportion of the population in developing countries underfed – consuming dietary energy inadequate to sustain more than light activity on average – was estimated to have fallen substantially over the last 15 years, from around one in three people in 1975, to one in five in 1989. This implies a considerable reduction in the numbers so affected, from nearly 1,000 million to just below 800 million. These calculations from FAO use a new indicator of low consumption, and revised methods of estimation, now including China. By this calculation, less people today are underfed than at any time in the recent past.

This estimate is considerably influenced by the improving situation in China. Excluding China (and certain other East Asian countries, such as Korea and Vietnam), a slight *increase* in total numbers underfed is still estimated by FAO, from around 540 million in 1979/81 to about 580 million in 1988/90.

### Sub-Saharan Africa

Nutritional trends have generally deteriorated or remained static in Sub-Saharan Africa during the 1980s, in contrast to all other regions. There are indications that some African countries with extensive community-level programmes may have achieved nutritional improvement, against the trend.

### South Asia



South Asia is estimated to be improving slowly, according to recent results from India and elsewhere, at around a reduction of half a percentage point prevalence of underweight children per year. Nonetheless, the underweight prevalence in South Asia remains the highest in the world, and over half the world's underweight children are in this region. Indications are that calorie consumption remained low throughout the 1980s, with little change, although this may have improved slightly for some poorer groups such as the landless.

#### *South East Asia*

Nutrition in South East Asia is improving rapidly in many countries, at around one percentage point of underweight prevalence reduction per year; this is in line both with considerable economic development, and with vigorous and widespread health and nutrition programmes at village level. Food consumption is relatively good, and has risen during the 1980s, along with marked success in food production to the point that a number of countries changed from net food importing to exporting.

#### *Middle America/Caribbean/South America*

Middle America and the Caribbean, and South America, saw some improvement in nutritional indicators during the 1980s, but little change in the latter part of the decade. Reductions in underweight prevalence (e.g. in Brazil, Chile), helped by such factors as improved education and lowered birth rates, as well as direct nutrition interventions, seemed surprisingly resilient to economic stress.

#### *Micronutrient Deficiencies*

Deficiency of vitamin A affects at least 40 countries, and, out of an estimated 14 million with resulting eye damage, blinds up to half a million preschool children each year. Important recent research shows that improving vitamin A status in children in deficient populations reduces mortality among young children by around one quarter. Vitamin A supply in some parts of South Asia and Eastern and Southern Africa is so low that deficiency is almost inevitable. In most regions the trend in availability is upwards, except in East Africa. Trends in the deficiency itself cannot be assessed at present.

Iron deficiency, one result of which is anaemia, is the only nutrition problem showing a general deterioration in many parts of the world. Prevalence is especially high in South Asia, where more than 60% of women are anaemic. In general, trends in dietary iron supply are downwards, for example in South Asia due to reduced production of legumes with the green revolution, in line with the worsening of anaemia. The main exception is Near East and North Africa, where iron supply is up and anaemia is down.

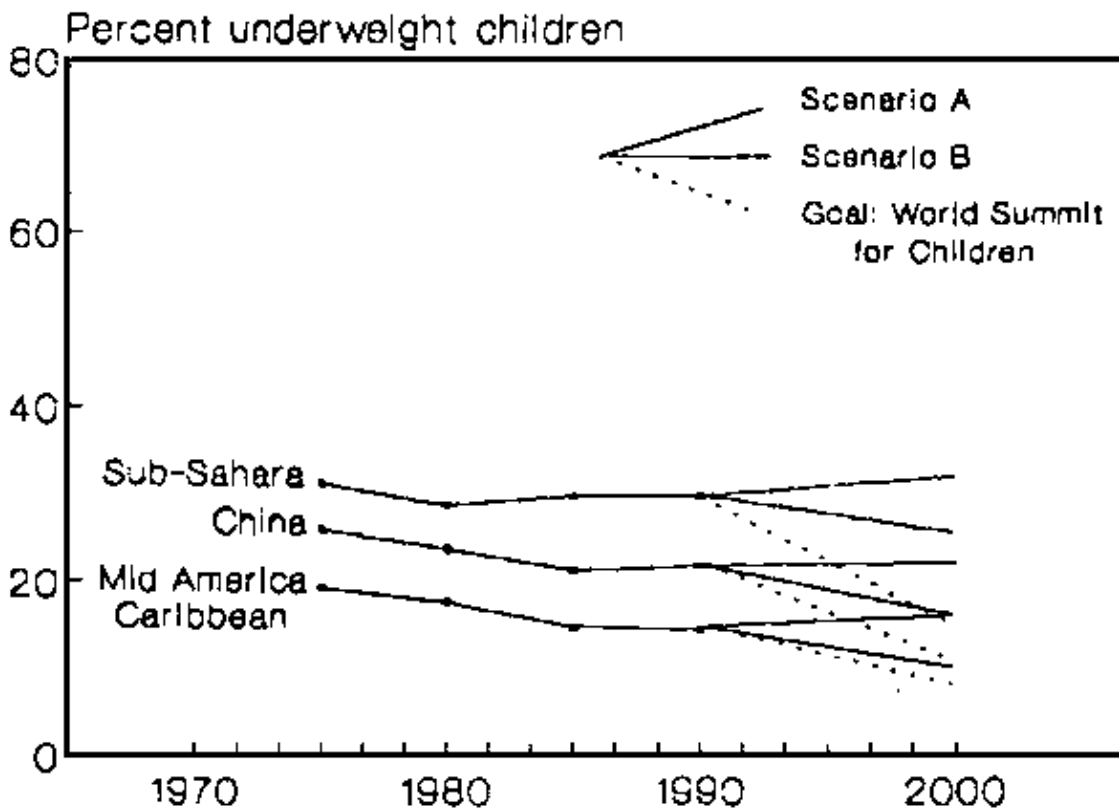
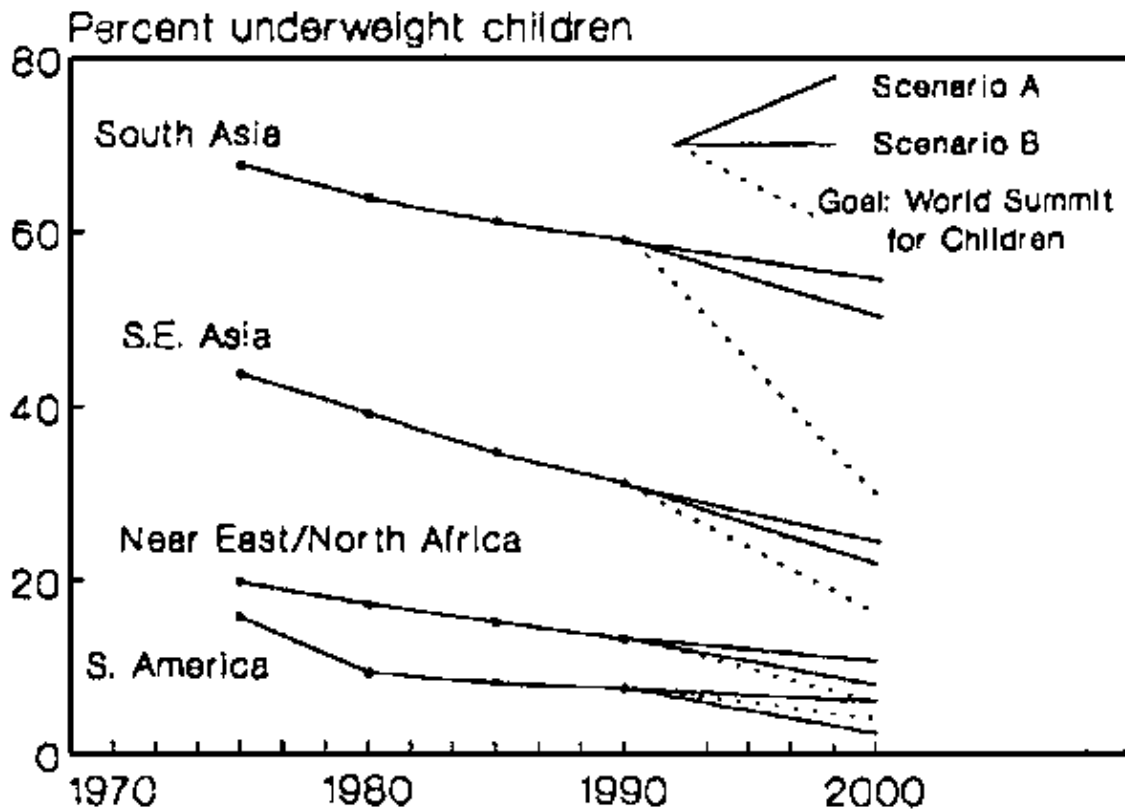


Figure 2. Projections: Trends in prevalence of underweight children: Year 2000

Scenario A – pessimistic Scenario B – optimistic

(Source: ACC/SCN (1992) Figures 6.1 and 6.2, p. 66)

Iodine deficiency remains the most common preventable cause of mental retardation, and there are estimated to be six million people with overt cretinism worldwide, and up to one billion at risk of some degree of deficiency. Programmes to control iodine deficiency are starting in many countries, and expanding in others, through fortification of salt and distribution of iodized oil.

Outbreaks of scurvy, pellagra and beri-beri have occurred among populations of refugees and displaced people. These deficiency diseases (of vitamin C, niacin and thiamine respectively) had not been seen for decades. They afflict people in camps whose diets are severely restricted in variety.

#### *Women's Nutritional Status*

The extent of stunting, underweight, and wasting in women in developing countries was assessed for the first time. The results show that these problems are very extensive in developing countries, particularly low body weight and thinness in Asia. Malnutrition in women is generally in line with estimates of low birth weight, and the intergenerational effects, of malnourished women having small babies who grow up to be small mothers, can readily be seen. Indications are that anaemia prevalences, already high, may be rising in South Asia and Sub-Saharan Africa. Maternal mortality rates are also feared to be increasing in Sub-Saharan Africa, in contrast to other regions.

#### *Diet-Related Chronic Diseases*

Assessments of premature mortality rates from chronic diseases possibly linked to diet indicate these to be falling slightly in the developing countries for which data are available, and to be generally below rates for developed countries. Dietary trends show increases in fat consumption with rising incomes in many countries. In general, the differences in fat intake between countries are explained more by food habits than by changes in incomes. However, because morbidity has not been assessed in developing countries in transition, and in the light of widespread reports of increased incidences of, for example, cardiovascular disease, it is urgent to begin to monitor the situation more closely, and to consider steps to reverse undesirable dietary trends.

#### *Projected Nutritional Trends*

Projections of possible nutritional trends are shown in figure 2 (using the indicator of percent underweight children). These are based on the historical trends, the pessimistic scenario being a continuation of the worst 5 year trend in the last 15, the optimistic being the best of these. These indicate continued improvement in most regions except Africa; however, the rate of improvement would be generally far below that needed to meet internationally accepted goals, such as those for the World Summit for Children (1990), endorsed by the International Conference on Nutrition (1992). Nutrition in Africa may continue to deteriorate. For South Asia, where the underweight prevalence is by far the highest in the world, although improvement may continue, the rate projected is such that many decades would pass before the problem is solved. Southeast Asia, although improving more rapidly, would still need to have an accelerated rate of improvement to meet proposed goals. South America, if the rate returns to that of the late 1970s, might meet the goals by the year 2000.

Source: ACC/SCN (1992), *Second Report on the World Nutrition Situation: Volume I. Global and Regional Results*. ACC/SCN, Geneva.

## **Food Prices and Nutrition**

Can food price be used to warn of a deteriorating nutrition situation?

*This article summarizes analytical work in the last few years for the Reports on the World Nutrition Situation and elsewhere, on the possibility of using food prices in nutrition monitoring.*

Often in times of shortage the price of food rises, and rising food prices in turn lead to decreased access to food in poor societies. Could, then, the monitoring of food prices – which are already widely collected and reported as part of consumer price indices – be used as a means of giving timely warning of a deteriorating nutrition situation?

Solid evidence that such a relationship between food prices and nutrition does exist has come from national nutrition monitoring programmes in several African countries. An early example was given in SCN News No. 4 (1989) in which retrospective analysis showed similar trends in food prices and child underweight prevalence in Ghana over the time of the severe economic crisis in 1982–84. Moreover, the results appeared to show that food price changes preceded changes in underweight prevalences by approximately three months – indicating that in this case food prices could have provided early warning.

A major obstacle to the investigation of whether the relationship held up consistently had been the scarcity of data showing rapid (e.g. monthly) changes in nutrition. Considerable data accumulated during the 1980s, particularly as a result of the Catholic Relief Services' Programmes in Africa, and some of these data were used in the SCN's "Update on the Nutrition Situation" (1989). Further analysis (by the SCN and ILO) of the data on food prices and nutrition again showed striking links between food prices and nutrition at national level. This was observed both for seasonal fluctuations, and when the seasonal effect was analytically removed (Kelly, 1989). The association tended to hold in Botswana, Madagascar, and Togo as well as Ghana (see table 1).

Since the earlier work in 1986–89, a number of other studies have been published investigating food prices in a deteriorating nutrition situation. Some have been at sub-national level and have found evidence of more complex relationships between food price and nutritional status amongst the most vulnerable groups, which may be masked in national level studies.

Despite fairly strong evidence of a link between food price and nutrition, there has yet to be extensive use of food-price data in nutrition surveillance systems. In this article it was felt worthwhile to pull together the results of various publications to clarify their implications for surveillance. An overall conclusion is that one should perhaps no longer be too timid in using the expected relationships of food price to nutrition as a means of early warning of possible nutrition deterioration. The message is that food price-based indicators could now be built into nutritional surveillance systems more widely.

### Food Access Indicators and Nutritional Change

There are several indicators of access to food which may be able to provide early warning of short-term changes in nutritional status. But for an indicator to be of practical use for this purpose, it needs to be available at monthly intervals, be routinely or easily collected, and have a high degree of association with nutritional status. Fulfilling the first two requirements for most countries in practice would strongly favour using wage or price data, with the latter being generally more readily available and reliable. Indicators such as the number of hours work necessary to buy a 'food basket' – which incorporate both wage and price effects – have potential, but are less likely to be routinely available.

If food price data *is* to be used as an early warning indicator, an important consideration is how well it fulfils the third condition of having a high degree of association with nutritional status. In the majority of poor areas, the income of a household together with prevailing food prices largely determine access to food and to some extent the nutritional status of its members, although other factors will be influential. Food price data may then tell only part of the story – for example, if food prices rise at the same time as household income, access to food may be unchanged. Other factors affect the nature of the relationship. Importantly food prices have different effects depending on which side of the market the household lies – net food purchasers will be adversely affected by food price rises, while net suppliers may benefit. Urban households dependent on wages differ from rural subsistence farming households in their response to food price changes, and such differences will be masked at national level. Rural areas themselves differ in the degree to which households are dependent on the market for food. In addition, urban areas often benefit from price-controls, which can distort assessment of the price-nutrition link at national level – for instance, if the group sampled for nutrition data is from the price-controlled group whilst the price data comes from rural areas with changing prices. Nutritional data should be from areas to which the price data apply. Many cross-sectional studies have reflected these differences and shown differing degrees of association, or none at all. Ideally, analyses should refer to local levels, where they are likely to be clearer and more meaningful.

**Table 1.** Relationship Between Food Price-Based Indicators and Nutrition for Selected Sub-Saharan Countries

Country	Correlation Coefficient between Consumer Price Index for Food and Prevalence of Underweight Children	Correlation Coefficient between Real Food Price Index <sup>a</sup> and Prevalence of Underweight Children	Lag Period between Food Price data and Nutrition data (months)
GHANA	0.21*	0.59**	3
TOGO	0.81**	0.85**	1
BURUNDI	0.13	-0.36*	3

BOTSWANA	0.68**	0.58**	0–6
MADAGASCAR	0.56**	0.60**	2

<sup>a</sup>Real Food Price Index = Consumer Price Index for Food/General Consumer Price Index as %

\* significant at 5% level \*\* significant at 1% level

Source: Tabatabai, H. (1989)

There are relatively few studies which have tracked changes in food prices and nutrition over time. Some that do exist have shown the highest association between food prices and nutritional status at various lag periods, usually ranging from 0 to 6 months (the lag allowing for transmission of effects of price to nutrition outcomes).

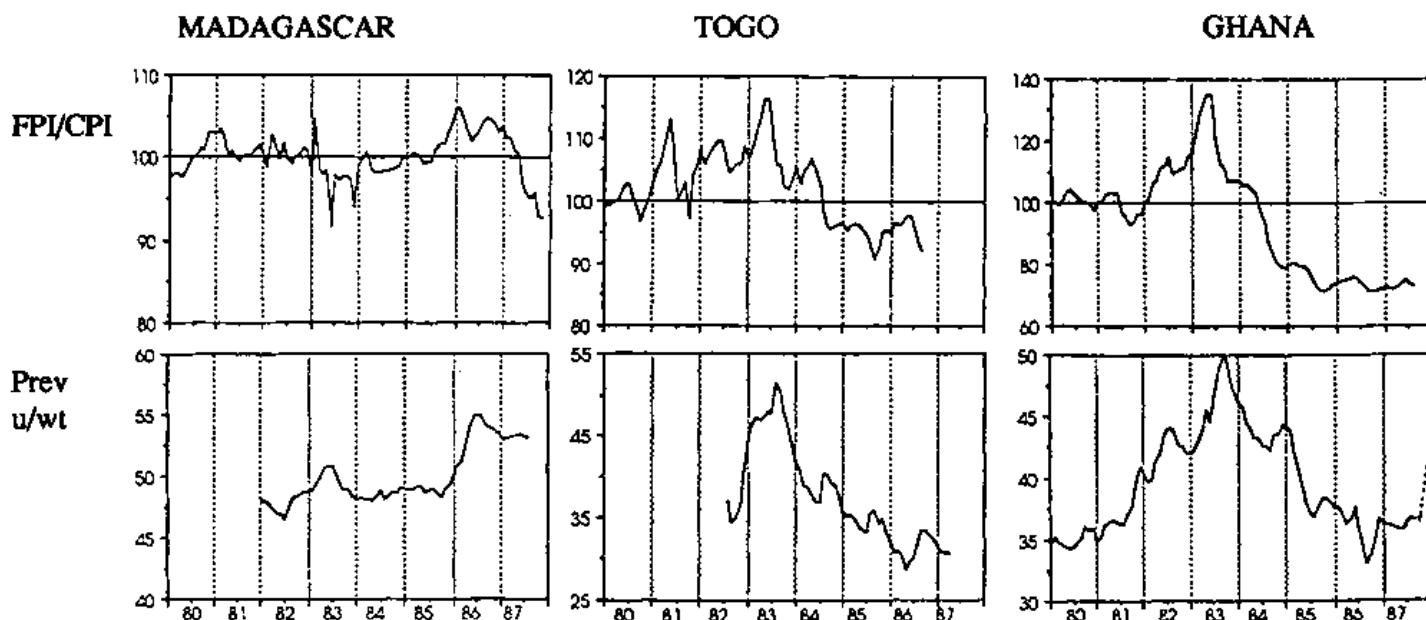
The SCN/ILO study investigated the relationship between different price-based indicators and child nutritional status in the following Sub-Saharan African countries: Ghana, Togo, Burundi, Botswana and Madagascar (Tabatabai, 1989). National prevalences of underweight children (defined as less than 80% of the NCHS/WHO reference weight-for-age) were tracked monthly over a period of 4–8 years during the 1980s; while data were clinic-based, trends were considered adequately representative (see ACC/SCN, 1989, pp. 181–184), despite non-defined samples of low coverage. Monthly price indices for food and all consumer goods were extracted from ILO's quarterly Bulletin of Labour Statistics. The results of the analysis are shown in table 1 and figure 1.

For most of the countries listed in the table, there was a positive and significant relationship between food prices and child nutritional status. Burundi was the exception even showing a weak negative correlation. This may be explained by the fact that Burundi is much more of a subsistence-based farming economy than the others, where increases in food prices may represent incentives to production, conferring income and nutritional gains later.

The highest degree of association emerged with the real food price indices. This indicator is likely to be available and particularly useful in urban areas, whereas in rural areas a suitable substitute could be based on the retail price of one or two major staples in a moderately-sized local market.

In Madagascar, underweight prevalences showed marked seasonal variations, whilst prices were relatively static, although the correlation was significant. In this case, the data needed de-seasonalizing before being interpreted. Seasonally was less of a concern for the analyses in Ghana, Togo and Botswana.

In another study in Sudan, between 1981–86, Teklu *et al* (1991) found that nutritional status showed a similar lagged correlation with changes in the relative prices of cereal and livestock. Poor market integration results in livestock prices dropping as cereal prices rise during drought and famine situations. Such unfavourable market changes strongly affected the poor, and children in particular.



**Figure 1.** Food Price and Child Underweight Prevalence in Madagascar, Togo, and Ghana Jan 1980 – Dec 1987

Notes.

1. FPI/CPI = Food Price Index/Consumer Price Index
2. MADAGASCAR: Deseasonalized prevalence of underweight (<80% Wt/Age) children aged under 5 years. Health Centre Data.  
 TOGO: Deseasonalized prevalence of underweight (<80% Wt/Age) children aged 6–60 months. Health Centre Data.  
 GHANA: Deseasonalized prevalence of underweight (<80% Wt/Age) children aged 7–42 months. Health Centre Data.

Source: ACC/SCN (1989)

### Child Nutritional Status as an Indicator of Community Food Stress

While at national level trends in food prices may show a strong lagged association with trends in child nutritional status, at district or community level, there may be other important relationships between price, food consumption and child anthropometry. Reductions in child nutritional status have conventionally been viewed as late indicators of acute food insecurity and famine. This is because it is assumed that people only reduce their food intake late on in the process of impoverishment and/or there is in any case a lag period between reduced food intake and reduced anthropometric status. However, studies at community level have shown patterns of behaviour such that changes in child nutritional status in vulnerable groups could provide early indicators of food problems in the larger population. Here are some examples.

A study from 1981 to 1986 in Niamey, Niger, examined relations between various price-derived indicators, anthropometric indices, and measures of “food crisis” (Khan *et al*, 1992). Results showed that in this case, again, changes in millet prices proceeded changes in wasting prevalences by around three months. They also indicated that wasting prevalence increases (deseasonalized) predicted generalized food crisis, as occurred in 1984/5 in Niger. One conclusion was that wasting prevalences “among the most vulnerable start increasing at an early stage, again about three months before the initial crisis turns into a community syndrome”. For the poorest households, anthropometry is a later indicator, but if they can be monitored, such changes may predict community level crisis. Indeed, this is often the purpose of using sentinel sites, where these are deliberately aimed at detecting changes among the most vulnerable.

In Wollo, Ethiopia, in 1982–88, monthly changes in child mean weight-for-length against monthly changes in grain price were again observed to show a more or less linear association. In this case, prices and nutritional status seemed to change simultaneously. Moreover, in 1984, an unusually steep drop in mean weight-for-length actually *preceded* the substantial grain price rise characteristic of severe acute food

insecurity. Again, the poorest groups in Wollo were the most vulnerable to factors causing food price increases, for example, drought. One of the first effects of a drought is a reduction in need for agricultural wage labour. Therefore, for some, household income and access to food were drastically cut whilst increases in prices followed later when stocks began to be depleted. In this way, changes in child nutritional status could have preceded changes in prices. An additional explanation may have been that in Wollo, households decided on dietary restriction in response to *perceived* food insecurity – *choosing* to go hungry (reflected in nutritional outcomes) in order to improve their chances of future survival. Similar sequences of response to this have been well documented elsewhere, for example in Darfur, Sudan (de Waal 1989, Young and Jaspars 1992). Undernutrition here may not have represented a failure in coping, but a cost of coping (Corbett, 1988). Where such a coping strategy is commonly adopted, anthropometric change in both children and adults would themselves provide early indicators of food crises.

## Conclusions

At the *national* level, trends in food price data have been seen in several African countries to be associated with trends in child underweight prevalences, price changes usually preceding underweight changes with a lag period of between 1–3 months. This is particularly useful as price data are usually readily available. The price–nutrition relationship also appears to be strongest where change is most extreme e.g. during drought, as seen in Ghana, Sudan, Ethiopia and Niger.

At *community* level, other important inter–relationships may occur between food prices, household energy consumption and child anthropometry, which will usually differ in their strength of association and periodicity between socio–economic groups. While food price change is still predictive of nutritional problems among children, the lag period between the two may vary for the most vulnerable socio–economic groups – so much so that changes in nutritional status of children in these at risk groups could be an earlier indicator of overall food crises in the wider population. Thus, if the need is to predict community–level food crises, both food price data and child anthropometric data in the most vulnerable socio–economic groups may provide useful early warnings.

In reviewing the evidence, this article draws on findings from several countries in Sub–Saharan Africa – Ghana, Togo, Burundi, Botswana, Madagascar, Sudan, Niger and Ethiopia. In summary, these results lead to the following conclusions:

- food prices can provide early indicators of nutritional problems at national level, and this relationship is particularly useful as food price data are usually readily available;
- these relationships are more complex at local level;
- anthropometric changes in children in the most vulnerable groups may sometimes actually precede food problems and price changes among the wider community, thus still providing an early warning of community–wide food problems;
- in this case, the 'warning' that is given is more useful (because earlier) if the poorest groups in the community are monitored.

– S.R.G./J.B.M./V.E.

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## **Food Security and Nutrition, 1971–91 – Lessons Learned and Future Priorities**

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*The following article is adapted from a testimony given by the authors to the US Congress in October 1991.*

The current world food situation is dramatically different to that in the early to mid–1970s. Given the massive food shortages of that period, policies aimed at increasing agricultural production were stressed in most developing countries. Many of these improved agricultural technologies, often collectively dubbed “the Green Revolution” were successful in reducing hunger.<sup>1</sup> Their effects have been direct, through increased agricultural employment, as well as indirect, through lower food prices and increased non–agricultural employment stimulated by increased farmers' incomes.

### **Household Food Security<sup>2</sup>**

The technological change in agriculture did help improve country level food security. However, even countries which achieved *national* food security did not banish food insecurity at the *household* and *individual* levels.

We now know that national food self–sufficiency is a poor proxy for household food security. It is common to have 20–30% of the population consuming less than 80% of caloric requirements even when the per capita supply of food within the country is at or above 100% of need.<sup>3</sup> It is the household's ability to obtain food that is critical in ensuring household food security. Of course the ability to obtain food is related to the household's purchasing power, which in turn is related to the household's income.

Higher income households are more likely to be food secure. However, it is also important to emphasize that it is not simply the absolute levels, sources and flows of income that are important in influencing household food security. For example, research by IFPRI and others finds that income controlled by women, particularly in Africa, is more likely to be spent on food. At similar levels of income, households with more women–controlled income are more likely to be food secure. There is also evidence to suggest that “lump–sum” sources of income, such as large payments for cash crop remittances, are less likely to be spent on improving household food security.

Thus, new policies that shift control of income from women to men and/or result in “lumpier” income flows might have negative impacts on the food security of the household, despite increases in its overall income level.

### **Female–headed Households and Food/Nutrition Security**

Policies can clearly affect household income, household food security and, in turn, nutritional status. But, recent evidence also suggests that non–income mediated pathways may be very important in the production of good health and nutrition. Work in Kenya and Malawi<sup>4</sup> finds that at very low levels of income some types of female–headed households have lower levels of preschooler malnutrition than higher income male–headed households. This is accomplished by women allocating proportionately more of their incomes to food and then allocating more of the total calories to their children. In addition, other types of time–intensive nurturing behavior – for example, feeding children more frequently – are more common in certain types of female–headed households. These successful behaviors are important to understand. Whereas poverty alleviation through income generation is likely to be a long–term process, interventions that promote



appropriate nurturing behaviour or that exploit incentives for households to invest in their children may be quite effective in providing short-term gains in child health and nutrition.

## **Diet Quality**

The issue of diet quality will become more important in the food security debate throughout the 1990s. Much of the early work on consumption effects of policies concentrated on the effects of income on calories, and to a lesser extent on protein. The assumption was that as the household or individual caloric consumption increased, the consumption of other micronutrients (vitamins and minerals) would also increase. We now know that this does not always happen. Some recent work at IFPRI from Kenya shows that for children, as their food intake increases, the consumption of vitamin-A-rich foods decreases. Adequate levels of vitamin A consumption are generally thought to be linked with lower rates of morbidity and mortality. One reason that vitamin A consumption is decreasing is that many of these vitamin-A-rich foods are seen as low-prestige foods.

## **Linkages between Agriculture and Nutrition**

Despite breakthroughs in improving food security, it is estimated that approximately 700 million people in the developing world survive on grossly inadequate diets.<sup>5</sup> Since many of the world's most food insecure and malnourished people live in rural areas where agriculture is the dominant sector, agricultural policies and programmes will continue to be important for achieving food security objectives. Agricultural policies that are labor intensive and thus generate employment for the rural landless offer an effective means for reaching vulnerable non-agricultural households.

We know that an increase in income at the household level is a necessary (but not sufficient) condition for improving the nutrition of women and children. But we need to explore innovative ways to *improve* the food security and nutrition impacts of income-generating policies themselves. This needs to be done in a way that does not create an expectation that the agricultural sector will become a substitute for primary health care delivery. Clearly it will not. However, given what appears to be the continuing problem with health care service delivery in rural areas, coordinating nutrition activities with agricultural programmes and projects already in place seems to be an attractive alternative for improving nutrition. One example of a type of agriculture/nutrition activity that offers the potential to improve food security and nutritional status includes credit with education programs targeted to rural women in Ghana and Mali. The assumption underlying this approach is that both income (via credit) and information are needed in order to bring about sustained improvements in nutritional status of household members. Other examples include agricultural extension services directed towards women with some food security messages integrated into the program such as is being done in Zimbabwe.

## **Two Important Goals for the 1990s**

We believe two issues in particular should receive greater attention in this decade. The first is the impact of policies and programmes on women's food security and nutrition. Almost all the attention given to women has focused upon their roles as mothers. However, given women's key role as economic actors in food production it is important to understand the impact of policies on women's nutrition. Some IFPRI work suggests that women who are better nourished are more productive in agriculture.<sup>6</sup> It is quite plausible that the major positive effect of policies and programmes on overall household food security and nutrition will come about through an improvement in women's nutritional status.

The second point is with respect to identification of the food insecure. Not only do we need to broaden our definition of food and nutrition security to include micronutrients, but we believe that we need to rethink our concept of cut-off points. Typically some absolute cut-off definition of food insecurity is used, such as households or individuals below 80% of requirements. This definition assumes that households just above that cut-off line are food secure. In many developing countries households just above the cut-off constitute a large percentage of the population. Rather than thinking about these households as food secure, it is more appropriate to classify them as very vulnerable to food insecurity. This issue will take on added importance if governments begin to dismantle programmes that have provided some protection to these vulnerable households. For these households the traditional coping mechanisms may not work.

We have learned much over the past 20 years about how to improve food security and nutrition. If this information can be translated into public policy during the current decade, more progress can take place.

Notes

1. J. Mellor, "Ending hunger: an implementable program for self-reliant growth", in J.I. Hans Bakker, ed, *The World Food Crisis: Food Security in Comparative Perspective*, Canadian Scholars' press, Toronto, 1990.
2. Food security, as used in this report means the availability of sufficient food, at all times, for all people, in order to ensure active and health lives.
3. Food and Agricultural Organization, *The Fifth World Food Survey*, FAO, Rome, 1987.
4. E. Kennedy and P. Peters, (1992) "Household Food Security and Child Nutrition: The Interaction of Income and Gender of Household Head". *World Development*, **20**, 1077–1085.
5. Mellor, *op cit*, Ref 1.
6. E. Kennedy with contributions from Pauline Peters, Howarth Bouis and Ellen Payongayong, "Agriculture/nutrition linkages", International Food Policy Research Institute, Washington DC, January 1991.

## **Long-Term Effects of Improved Childhood Nutrition**

### **Enhancing Human Potential in Guatemalan Adults Through Improved Nutrition in Early Childhood<sup>1</sup>**

<sup>1</sup> Edited for SCN News by Viki Elliot

*by Reynaldo Martorell, Cornell University, Ithaca, New York*

*Results of research in Guatemala have provided evidence that improved nutrition during early childhood has longer-term payoffs than previously documented. The following is an edited version of an article based on material presented by Dr Reynaldo Martorell and colleagues at a symposium held at the 1992 Federation of American Societies for Experimental Biology (FASEB) meetings in Anaheim.*

Poor nutrition is a powerful constraint to realizing human potential in poor societies. Operating in synergism with diarrhoeal, respiratory and other infections, poor diets in early childhood lead to growth failure, delayed motor and mental development, impaired immunocompetence and increased risk of complications and death from infections (Waterlow, 1992). Children who grow up in environments of poverty and malnutrition in developing countries have a diminished capacity for learning and are not able to take full advantage of even the limited educational opportunities to which they have access (Pollitt, 1990).

Research from around the world has documented that nutrition programs aimed at malnourished mothers and children lead to improved health and wellbeing. Typically, indicators used to evaluate the outcomes of these programmes have been measures taken concurrently with, or immediately following the intervention: among those usually included are birthweight, physical growth, mental development, and infant and child mortality rates. Until recent studies in Guatemala no one had attempted to assess the functional consequences of early childhood interventions in the adult.

In this article results are summarized of one such study, carried out to find out whether improved child nutrition leads to enhanced human potential in the adolescent and adult.

This study constituted the second phase of a research project which took place over nearly 20 years. In the first phase, the Institute of Nutrition of Central America and Panama (INCAP) carried out a longitudinal nutrition intervention study in four rural villages in Guatemala from 1969–1977. The second phase was a cross-sectional follow-up assessment carried out in 1988–89 on subjects of the earlier study and was a collaborative effort between Dr Juan Rivera at INCAP, Dr Ernesto Pollitt at the University of California at Davis, Drs Jere Haas and Jean-Pierre Habicht at Cornell, and Dr Reynaldo Martorell as principal investigator, at the time at Stanford University.

#### **Objectives of the 1969–1977 Study**

The INCAP Longitudinal Study (1969–1977) was designed to assess the impact of intra-uterine and preschool malnutrition on behaviour.

The design of the INCAP longitudinal study was heavily influenced by the belief held in the sixties that protein was the principal nutritional deficiency in Guatemala and in other poor countries. Thus, the study called for the provision of a supplement containing high quality protein during the critical first few years of life followed by comparison of physical and mental development in treated and untreated groups.

### **Design of the INCAP Longitudinal Study (1969–77)**

Two liquid drinks were prepared and distributed in the villages. One, the treatment, was a hot gruel made of Incaparina (a vegetable–protein mixture developed by INCAP), dry skim milk, sugar and flavouring. Per cup (180 ml), the *Atole*, as it was called, provided 163 kcal and 11.5 g of protein; it was also a rich source of many vitamins and minerals. The *Atole* was distributed and consumed in a centrally–located feeding hall in two of the villages twice a day, every day, during mid–mornings and mid–afternoons. All inhabitants were free to consume as much as wanted but consumption, both attendance and volume ingested, was recorded for only the target subjects of the study: pregnant women; mothers of young children (<2 yrs); and children up to 7 years of age.

A cool liquid called *Fresco* was selected for the comparison villages. Initially, the object was to make it non–nutritional. Cyclamates were considered as a sweetener until news about their potential carcinogenicity led to the formulation of a drink containing sugar and flavouring, providing 59 kcal per cup (180 ml). In 1971, vitamins and minerals were added to the *Fresco* in similar concentrations as in the *Atole*.

### **Data Collection in Mothers and Children**

A wide array of information was collected longitudinally for children in their first seven years of life. This included dietary surveys, continuous monitoring of morbidity, physical growth, and psychological testing. Maternal diet, morbidity and anthropometry were also monitored during pregnancy and in the first 24 months after delivery. Data about household composition, the occupations and education of family members, household income and wealth and other data were collected for all families. The INCAP Longitudinal Study is one of the most complete sources of growth and development data available in developing countries.

### **Guatemalan Follow–Up Study (1987–88)**

The follow–up study is unique. There have been some follow–up studies in developing countries but these have focused on very specific groups such as survivors of severe malnutrition. As far as is known long–term follow–up studies of nutrition interventions have never been carried out. A distinguishing feature of the follow–up study is its comprehensive nature: no study in developing countries has included the range of measures of human function which were included in the follow–up.

The central question of the follow–up study was: *does better nutrition during early childhood lead to adults with a greater potential for leading healthy, productive lives?*

The use of the word “potential” was deliberate. It was realized that productivity in an economic sense could not be adequately assessed in a young population (subjects were aged 11–26 years at the time of the follow–up). This could only come later when the subjects formed independent households and settled into their occupations. Similarly, other functions, such as parenting, could only be measured later when the young subjects of the study formed families.

### **Data Collection for Follow–Up**

The subjects of study were all former participants of the INCAP Longitudinal Study (born 1962 to 1977). Migrants were included, but only those that moved to Guatemala City and to the provincial capital of the study area. The target sample in the four study villages was the nearly 2,000 subjects of the original study and data was collected from 82% of these. If migrants are excluded from the target sample, the coverage rate was 90% – in other words, only 10% of those it was hoped to re–identify were missed.

The data collected included body size and composition, skeletal age, physical health, strength, work capacity and physical activity, fertility, school attendance and migration histories, intelligence, reading, numeracy and other functional performance tests.

### **Overview of Key Results from the Follow–Up Study**

In this brief overview of results three aspects are emphasized: body size and composition, work capacity, and intellectual performance. All three areas are very important and improvements in one or all would be seen as contributing to human capital formation.

Two aspects of the *body size and composition* results stand out. First, adolescents who had received the *Atole* (high energy supplement) during the first three years of life were taller and had greater fat-free masses (FFM) than those who received *Fresco*. And second, the anthropometric effects were greatest in females. The cut-off point of less than 149 cm, equivalent to a height of 4 ft 11 in., is often used as a criterion of obstetric risk in women. In females older than 16 years of age who were exposed to the supplements from birth to 3 years of age, 49% of *Fresco* subjects had very short stature compared to 34% of *Atole* women. Differences in FFM also stand out. Females from *Atole* villages had on average 2.1 kg more in FFM than females from *Fresco* villages. These differences are equivalent to an effect size of about 0.5, that is, equal to a positive shift of half a standard deviation. (Effect size is a commonly used measure of "magnitude". For example, the difference between the mean FFM [*Atole* minus *Fresco*] is expressed as a % of the standard deviation of the pooled distribution of FFM in *Atole* and *Fresco* subjects.)

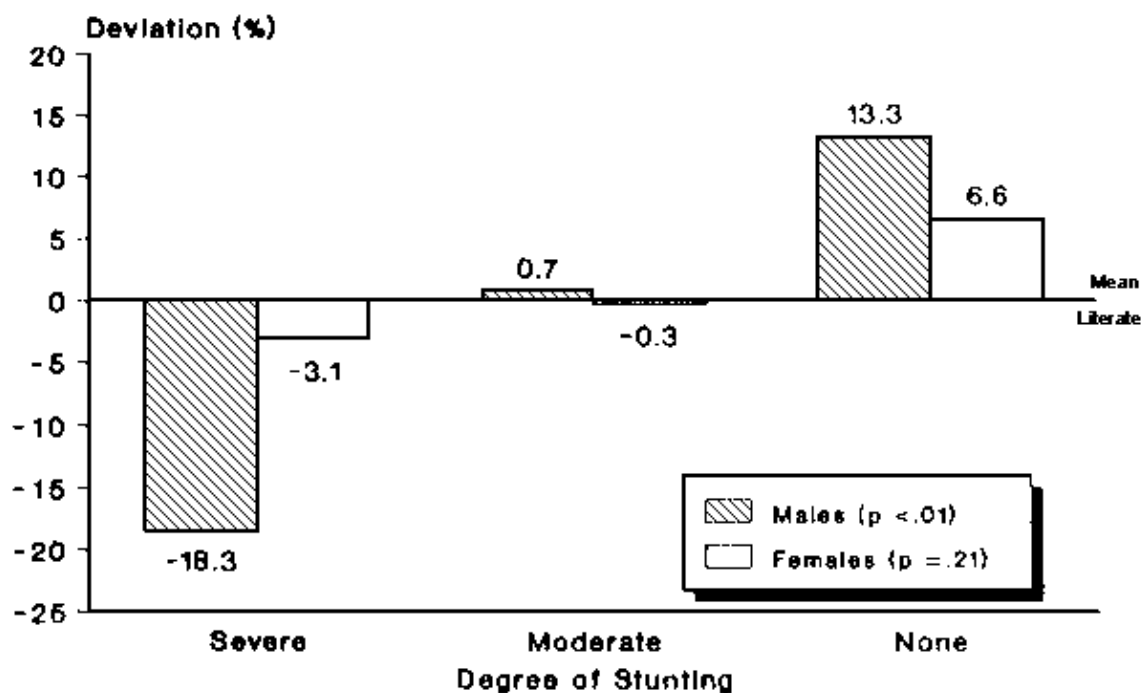
*Work capacity* was significantly improved in subjects exposed to the supplements in their first three years of life, but only in males. *Atole* males had maximal oxygen consumptions ( $VO_2$  max) that were 0.3 liters per minute greater than those of *Fresco* males. The difference is equivalent to about 0.7 standard deviation units. Another interesting finding is that the larger working capacity of *Atole* males could not be explained by differences in fat-free mass (i.e.  $VO_2$  max per kg of fat-free mass was still greater in *Atole* villages). The nature of these qualitative tissue differences between *Atole* and *Fresco* subjects is unclear.

A feature of all analyses carried out to date with respect to measures of *intellectual performance* has been that they control for schooling variables because the villages had differed in patterns of school attendance since before the study began. The *Atole-Fresco* differences found in children between the ages of 3 and 7 years were less than 0.2 of a standard deviation compared to differences of around 0.6 of a standard deviation found in adolescence using a summary variable of intellectual performance (i.e., a factor score that combines literacy, numeracy, general knowledge, Raven's Progressive Matrices, reading and vocabulary). In other words, the positive effects of childhood *Atole* supplementation appeared to become more marked as the children got older.

It is interesting to note that a further review of the Guatemalan follow-up study data (Martorell *et al*, 1992) has taken an alternative approach, looking at whether the level of stunting at 3 yrs showed any correlation with a number of outcome variables in early adulthood, including intellectual achievement. The study found striking relationships between early stunting and five indicators of later intellectual achievement. Figure 1 shows the deviation from the mean literacy score for adults > 18 yrs who had shown either severe, moderate, or no stunting at 3 yrs of age.

### **Potential Significance of the Results of the Follow-up Study**

The greater body size and increased fat-free mass found in females would be expected to impact positively on reproductive fitness. Short stature is a risk factor for cephalopelvic disproportion, delivery complications and maternal obstetric mortality. Also, greater FFM has been found to lead to larger birthweights.



**Figure 1.** Lagged effects of early childhood malnutrition on adolescent intellectual performance. Deviations from the sex-specific mean scores on the literacy test (78.8% in males and 76.4% in females) at 18 years in relation to early childhood stunting at 3 years.

Note: Using the WHO reference population, *severe stunting* was defined as length-for-age values < -3 SDs below the reference median. *Moderate stunting* was defined as values between -3.0 and -2.0 SDs below the reference median, and the *absence of stunting* was defined as values within 2 SDs of the reference median.

Source: Martorell *et al*, 1992

Second, the improved working capacity in males might result in increased productivity in men engaged in hard physical labor. The literature clearly supports this expectation.

Finally, sharp minds are valued by all societies and by parents everywhere in recognition that improvements in intellectual performance are bound to improve the capacity of individuals to function in a variety of settings. Consider two suggestions. One is that such improvements might lead to better employment opportunities and greater earnings. Another is that better intellectually endowed adults will be better parents, by virtue of being better providers as well as by being able to meet the developmental needs of their children.

### Concluding Remarks

Previous and recently conducted analyses of the INCAP longitudinal data have established that a nutrition intervention to mothers and children results in improved health and nutrition in the vulnerable phase of pregnancy and the first three years of life. It should be stressed that the intervention – distribution of supplements at a center for direct consumption – was selected because it facilitated verification and measurement of individual consumption.

Actual programs would undoubtedly follow very different strategies for improving diets, including approaches other than the direct distribution of foods.

The Guatemala follow-up study has established that the contributions of improved nutrition during early childhood to health and nutrition are measurable in the adolescent and adult. Its hypothesis, that such interventions result in improved human capital, is supported by the results to date.

*Dr Martorell is Professor of Nutritional Sciences at Cornell University and Chairman of the Advisory Group on Nutrition of the ACC/SCN. His current research focuses on the long-term functional significance of childhood malnutrition.*

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## **NEWS AND VIEWS**

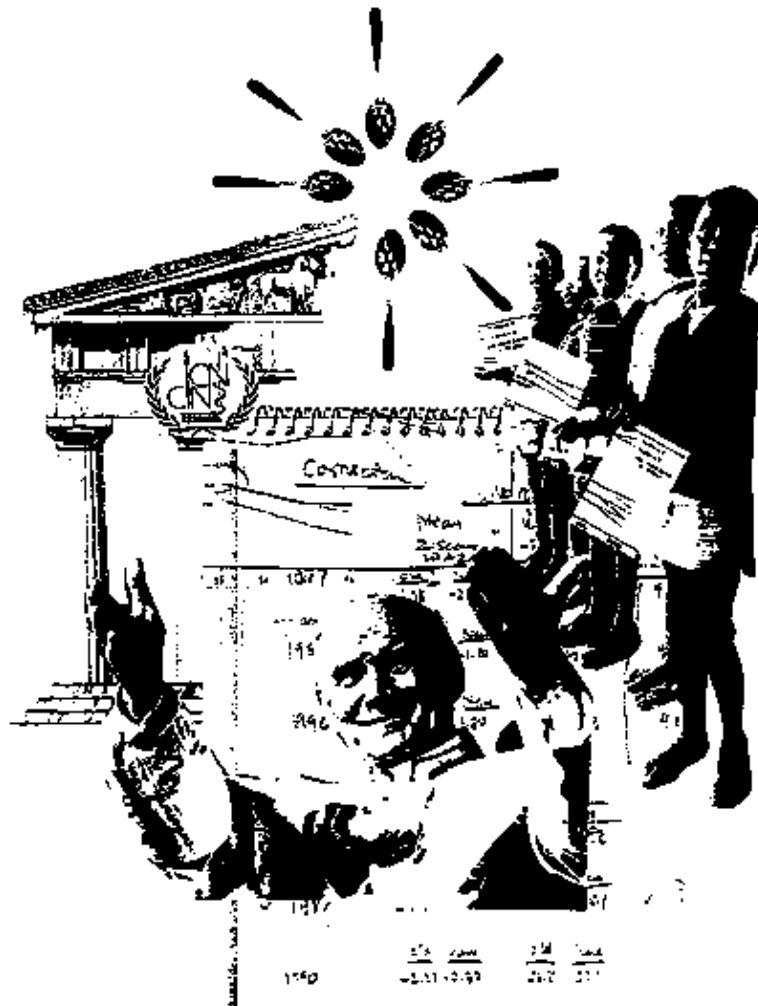
### **International Conference on Nutrition**

Following two years of preparatory activities on nutritional problems worldwide, the International Conference on Nutrition (ICN), co-sponsored by the United Nations Food and Agriculture Organization (FAO) and the World Health Organization (WHO), took place in Rome from 5–11 December, 1992.

Almost 1400 delegates from over 160 countries were present at the Conference, including government Ministers of Agriculture and Health and senior policy-makers, as well as representatives of international and nongovernmental organizations. The participants gathered to discuss and then adopt a World Declaration on Nutrition and a Plan of Action, expressing the determination to eliminate hunger and reduce all forms of malnutrition, and designed to put nutrition at the forefront of development issues.

The need for an International Conference was born out of the realisation that serious nutrition related health problems still exist in many countries, as laid out in the Declaration:

- “In a world that produces enough to adequately feed everyone, 780 million people in developing countries – 20% of their population – still do not have access to enough food to meet their basic daily needs for nutritional well-being.
- “More than 2,000 million people, mostly women and children, are deficient in one or more micronutrients; babies continue to be born mentally retarded as a result of iodine deficiency; children go blind and die of vitamin A deficiency; and enormous numbers of women and children are adversely affected by iron deficiency.
- “Hundreds of millions of people also suffer from communicable and non-communicable diseases caused by contaminated food and water. At the same time, chronic non-communicable diseases related to excessive or unbalanced dietary intakes often lead to premature deaths in both developed and developing countries.”



Speaking at the Meeting of the Preparatory Committee in August 1992, which preceded the International Conference, Dr Vulimiri Ramalingaswami, Secretary General of the ICN, said: "Poverty is the root cause of hunger and malnutrition which affects individuals and communities in multiple ways, often working in sinister synergy – low income, inadequate consumption, poor assets, powerlessness, low education, poor housing and sanitation, and proneness to infections."

His Holiness, Pope John Paul II, who addressed over 1,000 delegates on the opening day of the Conference, spoke of "the scandal provoked by the paradox of plenty which constitutes the main obstacle to the solutions of the nutritional problems of humanity", and urged participants "to make sure that no-one will be denied his daily bread and necessary health care."

The Plan of Action adopted at the Conference contains "a wide range of detailed strategies" providing a basis for "national plans of action" which individual countries will aim to revise or prepare by the end of 1994. Actions to be considered by governments in efforts to improve nutrition are: (i) incorporating nutritional objectives, considerations and components into development policies and programmes; (ii) improving household food security; (iii) protecting consumers through improved food quality and safety; (iv) preventing and managing infectious diseases; (v) promoting breastfeeding; (vi) caring for the socio-economically deprived and nutritionally vulnerable; and (vii) preventing and controlling specific micronutrient deficiencies.

Dr Hiroshi Nakajima, Director General of the WHO, speaking at the Conference, emphasised the need for international cooperation in eliminating nutrition-related problems: "reforms to improve health and nutrition throughout the world cannot be carried out by any one international agency. We must obtain the full participation of all multilateral, bilateral, and nongovernmental organisations. In the implementation of programmes all of us are equal partners in what I shall call a 'planetary pact' for nutritional well-being".

In a closing statement, Mr Saouma, Director-General of FAO said the Conference "opened a new area for dialogue and concerted action on a crucial problem for the future of mankind".

“At a moment when the spotlights of the entire world are focussed on the dramas of hunger provoked in both Africa and Europe by nature and the folly of man, this Conference allowed us to take a new look at the fundamental issues of food and nutrition.” However, he added, “the answers could only be found through profound reflection and unfailing determination”.

Elected Chairperson of the ICN, Mrs Simone Veil – former Health Minister of France and former President of the European Parliament – told the closing session of the Conference: “I wish that the message of hope expressed here will be heard outside this forum and will find a response during the coming decade for the concrete realization of the commitments we have all made here.”

(Source: ICN Press Releases, 30 November – 11 December, 1992)

### ICN Goals

*Extracted from the World Declaration on Nutrition, December 1992*

“18. We reaffirm the objectives for human development, food security, agriculture, rural development, health, nutrition and environment and sustainable development, enunciated in a number of international conferences and documents.<sup>1</sup> We reiterate our commitment to the nutritional goals of the Fourth United Nations Development Decade and the World Summit for Children.

“19. As a basis for the Plan of Action for Nutrition and guidance for formulation of national plans of action, including the development of measurable goals and objectives within time frames, we pledge to make all efforts to eliminate before the end of this decade:

- famine and famine-related deaths;
- starvation and nutritional deficiency diseases in communities affected by natural and man-made disasters;
- iodine and vitamin A deficiencies.

We also pledge to reduce substantially within this decade:

- starvation and widespread chronic hunger,
- undernutrition, especially among children, women and the aged;
- other important micronutrient deficiencies, including iron;
- diet-related communicable and non-communicable diseases;
- social and other impediments to optimal breastfeeding;
- inadequate sanitation and poor hygiene, including unsafe drinking water.”

<sup>1</sup> The World Food Conference, 1974; the Alma Ata Conference on Primary Health Care, 1978; the World Conference on Agrarian Reform and Rural Development, 1979; the Convention on the Elimination of All Forms of Discrimination Against Women, 1979, especially articles 12 and 13; the Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding, 1990; the Montreal Policy Conference on Micronutrient Malnutrition, 1991; the Rio Declaration on Environment and Development, 1992.

### World Alliance for Nutrition and Human Rights – The Oslo Initiative

A meeting was held in Oslo under the auspices of the Norwegian Institute of Human Rights and UNICEF, in July 1992, on nutrition and human rights. The following is taken from the meeting's report. The meeting discussed “... the need for a renewed effort to improve world nutrition and to ensure the supply of adequate food, through the promotion of relevant international human rights. It was decided that The World Alliance for Nutrition and Human Rights (WANAHR) should be established to provide a focal point for this effort.”

“... Access to adequate food is a human right, not an act of grace. The right to food is established in the Universal Declaration of Human Rights (1948), and the International Covenant on Economic, Social and Cultural Rights (1966). More recently, the Convention on the Rights of the Child (1989) and the Barcelona Declaration on Food Rights (1992) have re-affirmed the right. Nevertheless, the international community has failed to meet its obligation to respect, protect and fulfil this right, as demonstrated by the hundreds of millions of people who suffer from various forms of hunger and malnutrition. Included in this number are people who live in the world's richest nations.”



## World Alliance for Nutrition and Human Rights

*The following statement was issued by the participants of the meeting on Nutrition and Human Rights in Oslo, 9–11 July, 1992.*

### WORLD ALLIANCE FOR NUTRITION AND HUMAN RIGHTS

1. The Alliance will seek to pin the efforts of countries, bilateral and United Nations agencies, and other international organizations and NGOs working in the areas of nutrition, food, health, human rights and related disciplines. Its terms of reference include the following objectives and purposes.

#### TERMS OF REFERENCE

2. The Alliance, recognizing the difficulties and often the unwillingness of many countries and communities to provide and redistribute available and sufficient resources to ensure adequate nutrition for all, will seek, as a first step, to remove all possible obstacles which hinder the realization of adequate nutrition for all people and particularly for children.

3. The Alliance will seek to raise the level of priority for nutrition in the allocation of resources at the international, national and local levels. It will also urge governments to introduce into their domestic law such measures as are needed for ensuring adequate nutrition.

4. Considering that whenever food has been used as a weapon of war, throughout history and up to the present day, its worst effects have been on the civilian population, particularly on women, children and other innocent victims, the Alliance will promote the prohibition of food deprivation as a method of war. It will also advocate a total ban on the withholding of food for political ends when it deprives needy people of food.

5. Believing that obstacles to breastfeeding often serve as a human being's first hindrance to adequate nutrition, food and care, the Alliance pledges itself to further the principles of the INNOCENTI Declaration on the Protection, Promotion and Support of Breastfeeding (1990).

6. The Alliance will also seek to promote nutrition in a human rights context through research on this topic. Considering that nutrition is an outcome of adequate food, health and care, and can be seen as a reflection of the fulfillment of a wide range of human rights, the Alliance will also seek to develop a nutrition-based approach to human rights monitoring.

#### INITIAL ACTIVITIES

7. In pursuit of these objectives, the Alliance envisages, among other things, the following initial activities:

(a) calling on the Secretary-General of the United Nations to use his position and good offices to further the cause of adequate nutrition through the implementation of human rights;

(b) recommending that the Sub-Committee on Nutrition of the United Nations Administrative Committee on Coordination, as the body harmonizing nutrition policies in the United Nations system, establish a Task Force on this issue and hold a meeting on Nutrition, Ethics and Human Rights;

(c) inviting, and as appropriate assisting, a limited number of interested countries to address their food and nutritional problems in a human rights context;

(d) calling a meeting of NGOs and other groups to discuss and further the aims of the Alliance;

(e) contributing ideas or proposals for a nutrition-based approach to human rights monitoring to the December 1992 meeting on human rights monitoring indicators to be organized by the Centre for Human Rights, and promoting nutrition and human rights at the World Conference on Human Rights to be held in Vienna in 1993.

8. The Alliance plans to convene periodic meetings of individuals, representatives of NGOs, United Nations agencies and other organizations to discuss issues and joint activities related to nutrition and human rights.

9. The Alliance will work under the auspices of a broadly-based Executive Committee, with a small secretariat. It will establish Task Forces in such areas as research, monitoring, education and training, and, curriculum on nutrition, ethics and human rights.

10. The Alliance will seek funding from a variety of sources, including bilateral agencies, foundations, United Nations agencies and others to further its work.

“The meeting believed that hunger and malnutrition are primarily problems resulting from the lack of access to adequate resources rather than from a scarcity of resources. It also believed that a primary focus on household food security provides the best framework for ensuring that the concept of food security is translated into a fully realised right to food. In addition, it was recognised that food, even when adequate, does not by itself ensure good nutrition, and that good health and adequate care are also essential.”

The aims of the Alliance (shown in the Box) include raising the profile of nutrition, as feasible with appropriate legislation; advocating a total ban on withholding food for political ends when this deprives the needy; promoting breastfeeding and fostering research; and nutrition in monitoring of human rights. Initial activities include asking the SCN to set up a task force on the topic.

The “Oslo initiative” highlights the view that adequate nutrition is an ethical issue: people have a *right* to be well-nourished. This moral argument is gaining momentum, as commitments to eradicate poverty, hunger, and malnutrition (see SCN News # 7, p. 15). “The universally recognised human rights are drawn from four essential freedoms: freedom of speech, freedom of faith, freedom from want, and freedom from fear. Freedom from want, though widely recognized, has not been realized by a significant number of people in many parts of the world.” Freedom from hunger and malnutrition is a central part of freedom from want.

(Source: Norwegian Institute of Human Rights, Grensen 18, N-0159 Oslo, Norway, Tel. (47 2) 42 13 60 Fax (47 2) 42 25 42)

### **Can Energy Supplementation during Pregnancy Improve Later Child Growth?**

For infants and young children in developing countries, malnutrition is still a common problem which results in growth retardation. In many countries, this problem is being addressed by investment in preschool-age child feeding programmes. Although such programmes undoubtedly have beneficial effects, the reported improvements in growth, assessed by anthropometric measurements, have often been surprisingly small.

It has already been suggested that maternal undernutrition during pregnancy could be an important contributory factor to postnatal growth retardation, and previous studies have looked at the effects of supplementation of both the diet of the mother during pregnancy *and* that of the child. A recently published study, however, has assessed the effect on child growth of improvements in maternal nutrition *alone* – with important results.

The study took place in Madura, East Java, where a random sample of pregnant women from three villages were given energy supplements in their last trimester of pregnancy (for 90–100 days). Women received either a high energy (HE) supplement of 465 kcal or a low energy (LE) supplement of 52 kcal. The development of the children of women who had complied for at least 90 days was tracked from birth to the age of five years. Measurements were taken of birthweight, the length at age 1 week, the weight and length every four weeks until age 12 months, and the weight and length every 3 months after that. Analyses have shown that HE children were significantly heavier than LE children up to the age of 24 months and that HE children were taller throughout the first 5 years. Weight-for-height (a measurement of wasting) was similar in both groups, but low height-for-age (stunting) was less prevalent in HE children.

What exactly causes this effect is not discussed in detail by the authors of the study, but they do suggest that HE mothers may have had an improved breastmilk output and that their better nourished children were less likely to become sick.

These results may have important implications for the targeting of future supplementation programmes which aim to improve child development. As the authors say: “If supplementary feeding is an option as a component of maternal and child health services or of nutrition programmes, it seems more productive and cost-effective to target this intervention to pregnant women than to children.”

(Source: Kusin, J.A., Kardjati, S., Houtkooper, J.M., Renqvist, U.H. (1992). Energy Supplementation During Pregnancy and Postnatal Growth. *Lancet*. 340, pp. 623–26)

### **The Dangers faced by Children in the Americas**

The following excerpts are taken from an interview published in *Newsweek* with Luis Rivera, deputy regional director of UNICEF for Latin America and the Caribbean, and coordinator of a recently published study “Children of the Americas”.

*“What is the biggest danger to children's health in the Americas?”*

We are losing close to a million children under 5 years of age every year. That is the largest catastrophe in Latin America. The main causes of death are malnutrition and infection – the sinister alliance. A disease that normally could be fought by a healthy body gets a malnourished child into a set of potentially fatal complications. The main specific cause of death is childbirth complications, accounting for 32 percent of deaths of children aged up to 5 years old. In many poor areas of Latin America the infant mortality rate is increasing. There was a time in Latin America when infectious disease was the main cause of childhood death and respiratory disease the second. Now they are moving to second and third place and have been replaced by childbirth, which is related to malnutrition of mothers.

*“What besides disease are the main threats to children?”*

There are at least 30 million children aged 10 to 14 working in Latin America; 15 million of them have to work in the street. Some of them have families, but many of them do not. They are exposed to criminal violence and accidents of all kinds. In Colombia, at least 2,000 of the 28,000 people killed last year in various conflicts were children. Throughout Latin America, at least 2 million children are exposed to armed conflicts. Our report says that children who join guerrilla organizations learn to kill before they learn to read and write.

*“In Brazil and other big countries the internal inequalities are striking.”*

You find big gaps in society. Among the well-to-do people in Sao Paulo, for example, the infant mortality in a city neighborhood could be matched with Sweden or Norway. The same in Colombia, where in a wealthy neighborhood the infant mortality is 10 per 1,000 or less. But you go to the Pacific coast or an indigenous community, and the rate is above 100 – a 10-to-1 difference. A country with such discrepancies, such inequities, is a time bomb.

*“If everybody in Latin America had access to potable water, how many of the health problems would be resolved?”*

Of the preventable health problems, 60 percent or more. There are an estimated 100 million people without adequate drinking water in Latin America. More people die of cholera than of AIDS in Latin America.



*"Drinking-water access used to be a rural problem, but it's now an urban one."*

The cities have exploded beyond the capacities of the infrastructure. Latin America has gone from 30 percent living in cities to about 70 percent now. Many of these people live in areas where it is very difficult to make streets, very difficult to put in sewer and water systems.

*"Is there any country in Latin America where conditions are improving?"*

Chile, Costa Rica, even Cuba. Mexico is on its way to apparently big improvements. They have a meeting every six months on their national plan of action to improve the situation of children.

*"What does UNICEF do to improve children's lives?"*

We contribute mainly two things: health education – because if you have better knowledge about infection, about care of water, you can do something. And trying to come up with simple technology as an intermediate solution, such as low-cost water chlorinators.

*"Since the UN children's summit, have conditions for them gotten better or worse in Latin America?"*

In terms of hopes – better. But unfortunately it takes time to change reality. The only United Nations goal that has been satisfactorily achieved is immunization. But compare the cost and the technology of immunization versus providing water and sanitation. There's a huge difference. In Latin America we are receiving about one tenth of UNICEF resources – \$100 million. You think with \$1 per person per year you can provide adequate water for the 100 million people who need it? Where are the finances going to come from?

*"Why, then, is there more hope?"*

A wealth of nongovernmental organizations have developed outstanding social technologies. In maternal mortality there is a safe child-delivery program from Bolivia, using low-cost technology. Colombia has more than half a million community child-care programs known as *hogares comunitarios*, with nutrition, some learning, some socialization. Mexico and Brazil have innovative protection and education programs for street children. Nineteen countries in Latin America have prepared their national plans of action, which include specific goals for the year 2000. These include reducing the child-mortality rate by one third, which would save 1.8 million lives, and reducing maternal mortality by half, saving 86,345 lives."

(Source: *Newsweek*, 19 October 1992)

## **New Initiative for Displaced Populations**

Following one and a half years of intensive research in collaboration with other UN organizations, nongovernmental organizations and bilateral aid agencies, WHO has launched an initiative “based on a process of integrating aid for all displaced persons, without distinction between the various groups”.

People who have been forced to leave their homes to seek refuge abroad for a variety of reasons including war, natural disasters, and less obvious but no less distressing forms of repression and violence, often find themselves deprived of adequate housing, food, water and sanitation and at present there is no international machinery offering a comprehensive and integrated approach to the problems of protecting and assisting displaced persons.

In order to address this problem, in the first instance a three year emergency preparedness programme entitled “Health and Development for Displaced Populations” has been set up, funded by the Italian Government. Within WHO the Division of Emergency Relief Operations is responsible, and an inter-agency committee with representatives from UNHCR, UNDP, WFP, ILO, UNICEF, UN/DHA, and nongovernmental organizations such as the Red Cross and WWF presides over its implementation.

Work on this programme is already underway in Central America, in collaboration with UNDP and has just started in Croatia, Mozambique and Sri Lanka.

(Source: WHO press release, 7 October 1992)

## **Health and the Environment**

According to a report produced by the WHO Commission on Health and the Environment, following a two-year study on the links between health and environmental degradation: “Diseases related to the environment and to life-style, especially infectious diseases and cancer, kill an estimated 75% of the 49 million people who die each year. Some 2.5 thousand million people suffer from illnesses associated with insufficient or contaminated water and lack of sanitation.”

The report constituted the WHO's main contribution to the United Nations Conference on Environment and Development (the Earth Summit), held in June 1992. Below are excerpts from an issue of WHO Features, published in March 1992 based on the Commission's report:

“The Report highlights the leading health problems associated with a deteriorating environment.

- More than 2000 million people live in life-threatening and health-threatening environments. Much of the housing in developing countries lacks the most basic requirements for health. Poor housing leads to social and psychological problems, including alienation, drug abuse, family break-up and urban violence.
- Growing urban populations are faced with threats to their health from numerous environmental sources. More than 1000 million city dwellers are exposed to high levels of air pollution. In children, increases in levels of lead in the blood and decreases in respiratory function are related to environmental conditions.
- Indoor air pollution from open fires is the largest energy-related source of ill-health. Biomass fuels (wood, dung and crop wastes) are used to meet the energy needs of 2.5 thousand million people, mostly in rural areas. They are burned on open fires in unventilated rooms, giving off smoke and chemicals that contribute to respiratory disease, long-term cardiovascular effects and cancer. Some 700 million women – with their children – spend most of their time in this environment and are at the greatest risk.
- In industry, serious health risks are faced by workers in small-scale or cottage industries, where accident rates and exposure to toxic chemicals are

usually high. Health problems are most severe in developing countries, where fewer health standards are applied to limit workplace risks. Potentially dangerous industries are routinely located away from large populations in only a minority of countries.

- In agriculture, chemicals are widely misused, especially in developing countries where regulations and enforcement are more lax leading to some one million acute poisonings each year, excluding suicide.

“To address the many problems, the Commission urged that:

- governments and international agencies should give high priority to reducing population growth, over-consumption and waste generation;
- organizational changes should be made within government structures to give greater priority to community-based initiatives and participation;
- governments and aid agencies should give high priority to building up local capability for promoting health and environmental quality, using local knowledge, skills and resources;
- governments, international agencies and public and private institutions should develop national capabilities for the systematic monitoring of environmental effects on health, so that policies can be based on reliable and regularly updated information;
- the health profession should be at the forefront of moves to improve the environment and to inform governments and the public of the health implications of development policies and the costs and benefits to health and the environment of alternative strategies.”

(Source: *WHO Features*, March 1992)



## Misconceptions on Nutrition of Refugees

*The following letter was published in the Lancet in late November, 1992.*

SIR, – We are disturbed by misconceptions about nutrition that seriously jeopardise the successful control of malnutrition in refugees and displaced persons. The United Nations coordinating body in nutrition, the UN Advisory Committee on Coordination, Sub-Committee on Nutrition (ACC/SCN), has a working group on refugees and displaced people, which met on July 7 and 8, 1992, and urged that we draw attention to these misconceptions. The group represents all the UN agencies concerned and several donor governments and non-governmental organisations.

Although shortages of staff and money and inadequate organisation constrain the effective prevention and treatment of malnutrition among refugees and displaced people, the correction of misconceptions could save lives and safeguard health. Six serious misconceptions that need correction are:

*“Starving people can eat anything.”* It is widely held that people who are starving will be very hungry and eat any food that can be supplied. This attitude is inhumane and incorrect. Even if hungry initially, people often do not consume adequate quantities of unvaried and unfamiliar foods for long enough. More importantly, starving people are often ill and may not have a good appetite. They will therefore languish in an emaciated state or get even sicker. Even someone well-nourished would fail to thrive on the monotonous diets of three or so commodities (eg, wheat, beans, and oil) that is all that is available, month in, month out, to many refugees and displaced people. And this is aside from the micronutrient deficiencies that often develop. This misconception starts, in part, from a failure to agree on explicit objectives for food assistance – which should surely be to provide for health, welfare, and a reasonably decent existence and help in attaining an acceptable state of self-reliance and self-respect.

*“Children with diarrhoea should not be intensively fed.”* A view from many years ago, and from non-emergency situations, sometimes persists – namely, that children must be rehydrated (and diarrhoea prevented) before re-feeding. This policy is incorrect and, with severely malnourished children, it can be fatal. Any child with diarrhoea must be fed, if necessary with a liquid diet by nasogastric tube, at the same time as additional fluids are given. Even if the diarrhoea is profuse, some nutrients are absorbed and can start the recovery process. To begin feeding after rehydration will often be too late.

*“Refugees can manage with less.”* This misconception dehumanises the refugee. It implies that, once uprooted, he or she no longer has the basic human rights to food, shelter, and care – that these are now offered as charitable acts and that refugees can (or should) make do on much less than non-refugees. In fact they will often need more than their normal food requirement at first if they have become malnourished and sick before arrival at a camp and need rehabilitation; and may suffer exposure from inadequate shelter.

*“Trading foods indicates that people do not need all of the rations.”* If the only food source is provided by camp organisers, these rations have to be adequate in all nutrients. This requires a mixed food basket, including fruits and vegetables. If this cannot be ensured then trading may have to be encouraged if refugees are not to become undernourished and deficient in micronutrients. The fact that some foods may be traded, to add variety to the diet, is no grounds for reducing the ration.

*“A standard ration is suitable for all populations.”* The recommended per caput calorie output for a refugee population should vary according to demographic composition, nutritional and health status of the population (allowing for an extra “catch-up” allowance where people are malnourished), the activity level the intake is intended to support, environmental temperature, and likely wastage in the chain from supply of food in a country to its consumption by individuals. In other words there is a range of requirements for dietary energy, which will depend on the circumstances, and use of a single figure is likely to lead to either deficit or wastage. The figure of 1900 kcal (commonly assumed to be of general application) often underestimates what is needed.

*“Energy adequacy means nutritional adequacy.”* The diet needs to be adequate in both quantity and quality, meeting requirements for calories, protein, and micronutrients. Where refugees are completely dependent on the ration provided – for example, in the early stages of an emergency or in doped camps, where trading for diversity cannot be ensured – the ration must be designed to meet the requirements of all nutrients in full. Often, a ration is designed to meet minimum energy requirements and micronutrients are left to look after themselves. How micronutrient needs are to be met must be made explicit, especially when the ration provided is calculated on the basis of fully meeting energy needs. Foods should be diverse and palatable,

and the special needs of weaning children must be met.

These and other issues are being addressed in a collaborative inter-agency revision of the 1978 manual *The Management of Nutritional Emergencies in Large Populations*, to be published soon by WHO.

John Mason (ACC/SCN), Stuart Gillespie (ACC/SCN), Graeme Clugston (WHO Nutrition Unit), Peter Greaves (UNICEF Nutrition Cluster)

(Source: Lancet, November 28, 1992, **340**, p.1354)

## **Sharing Experiences: How to End Half the World's Hunger by the Year 2000**

*Contributed by Robert S Chen, Alan Shawn Feinstein World Hunger Program, Brown University.*

Can world hunger be significantly reduced in the 1990s? More than two years into the decade, the clock is now ticking on the Bellagio Declaration's ambitious goal of ending at least half of the world's hunger by the year 2000. The Declaration, devised by 24 scholars, experts, and practitioners who met in 1989 at the Rockefeller Foundation Study and Conference Center in Bellagio, Italy, identifies four achievable goals for overcoming hunger in the 1990s: 1) eliminating famine deaths; 2) ending hunger in one half of the poorest households; 3) cutting malnutrition among women and children by half; and 4) eradicating iodine and vitamin A deficiencies.

Fortunately, there is progress to report and promising experience to share. At the fifth annual Hunger Research Briefing and Exchange and the associated awards ceremony for the 1991-92 Alan Shawn Feinstein World Hunger Awards (Brown University, 8-10 April, 1992), researchers and practitioners reported on a diverse set of successes in reducing hunger around the world. These ranged from early efforts to rebuild food security in areas of Central America and Africa, where peace has finally begun to emerge, to the remarkable accomplishments of integrated nutrition and rural development programmes in Asia. What is most striking is that there are numerous excellent examples of programmes that have succeeded in "scaling up" – those that have engaged hundreds of thousands or even millions of people in effective efforts to reduce hunger. In Thailand, as reported by Kraissid Tontisirin of Mahidol University, a decade of integrated multisectoral efforts focused on malnutrition have helped to eliminate severe protein-energy malnutrition among children and to cut mild and moderate malnutrition by half. In Pakistan, the Aga Khan Rural Support Programme (AKRSP) has spurred the creation of more than 1,500 village organizations and 500 women's groups, leading to positive economic, social and nutritional benefits for hundreds of thousands of people in the northern areas of that country. According to a recent World Bank evaluation, "once a government decides to pursue local-level programs of rural development, AKRSP can provide a proven approach, complete with a workable model and implementation method."

The variety of approaches is also encouraging. Briefing participants reported on several different programs to support microenterprise development, including "Credit with Education" activities sponsored by the Freedom from Hunger Foundation and "Trickle Up Enterprise Zones" organized by the Trickle Up Program. Innovative ways have been developed to educate and assist people using the radio, through seed distribution, and by working with the educational and primary health care systems. For example, the Developing Countries Farm Radio Network, winner of the 1991-92 Feinstein Merit Award for Communication and Education, has reached more than 100 million listeners in 94 countries, with informative scripts on health, nutrition and agriculture. Seeds for the Americas, a partnership of business, foundations, and NGOs, has worked with many different local groups to help start more than 50,000 family gardens in Latin America and the Caribbean. Marcia Griffiths of the Manoff Group emphasized the importance of building mothers' self-confidence as a key to improving their care of children, especially during the critical breastfeeding and weaning periods. A "three-pronged" intervention programme based on nutrition education, targeted supplements, and food fortification has proved effective in reducing vitamin A deficiency in Indonesia, as described by Ignatius Tarwatjo of the Indonesian Ministry of Health. One feature of many of these efforts has been careful attention to monitoring and information needs as part of both short- and long-term decision making.

Further progress towards the Bellagio goals will very much depend on adapting to and working with change. Robert Kates, Director of the World Hunger Program, emphasized in his opening keynote address at the Briefing the need to find "common cause" among the differing agendas of hunger, population, and environment; between the competing needs of east and west, north and south; and between short and long term solutions. Thomas Weiss and Larry Minear reported on the Brown University/Refugee Policy Group project on "Humanitarianism and War", which is developing principles and policy guidelines for aid practitioners in situations of armed conflict. Rapidly evolving norms for human rights, national sovereignty, and



even “environmental rights” are providing new opportunities to put principles into practice in the delivery of humanitarian assistance and the protection of the basic human right to food. Rapid restoration of food security is itself critical to maintaining and strengthening peace and democracy “after the wars”. But this can be a difficult challenge in areas still plagued by violence and social and economic inequity, as emphasized by Carmen Monico of the Cordes Foundation, who accepted the 1990–91 Feinsein Merit Award for Public Service on behalf of the repatriating villagers of El Salvador.

Greater optimism about the future was reflected in remarks by Ronald Roskens, Administrator of the US Agency for International Development, and actress Audrey Hepburn, UNICEF Goodwill Ambassador. Roskens highlighted the potential after the end of the Cold War for significant progress in health, education, child survival, economic growth, political freedom, and hunger, emphasizing the leadership role that the US can and should play. Hepburn, as Honorary Chairperson of the Feinsein awards ceremony, spoke eloquently of civilization's rare “second chance...to build a strong and promising future for our children” now that “the old order has come tumbling down”.

Nevertheless, much remains to be done. Preliminary results presented by Marito Garcia of the ACC/SCN illustrate how large and difficult the task of reducing child malnutrition by half by the year 2000 may be. James Ingram, former Executive Director of the UN World Food Programme and winner of the 1991–92 Alan Shawn Feinsein Award for the Prevention and Reduction of World Hunger, underscored the many institutional limitations that persist in the relief and development community and the need for institutions focused solely on humanitarian assistance. International consensus on ending hidden hunger has grown, but the challenge is now to develop specific national strategies to eliminate micronutrient deficiencies throughout the developing world.

The Briefing also served as a forum for discussion of the recently released Medford Declaration to End Hunger in the US (see box), drafted by a committee representing US hunger organizations in Medford, Massachusetts in 1991. The Medford Declaration – inspired by discussions regarding the Bellagio Declaration at the 1990 Hunger Briefing – is an initiative to end domestic hunger in the US by 1995 and achieve economic self-reliance for most American households by the year 2000. Strikingly, many of the themes and approaches evident in international efforts to reduce hunger – for example, the provision of credit and the problems of scaling up – were echoed strongly in discussions about how to end hunger in the US. It is expected that comparisons between developed and developing countries will figure strongly in the sixth annual Hunger Research briefing and Exchange, tentatively scheduled for April 1993.

[A detailed report on the fifth Hunger Research Briefing and Exchange is available from the Alan Shawn Feinsein World Hunger Program, Box 1831, Brown University, Providence, RI 02912, USA. The text of the Bellagio Declaration in English may be obtained via electronic Mail from Robert Chen@brown.edu or in English, Chinese, French, German, Portuguese, or Spanish from the World Hunger Program.]

### **Dutch Guidelines for The Use of Milk Products in Food Aid**

The following extract is taken from a publication of the Netherlands Government setting out guidelines for the use of milk products in food aid. The information is directed towards decision-makers at policy level and agencies involved in the selection of commodities.

#### **“A. GENERAL**

1. These guidelines are designed to define the role of milk products in food aid and are based on a consideration of factors such as relevance to development, nutritional content, economic value, cultural effect, health hazards and possible misuse of milk products compared to alternatives.
2. Only the milk products Dried Whole Milk (DWM), Dried Skim Milk enriched with vitamin A (DSE) and Infant Formula can be considered as commodities for food aid, but the need is limited. There is no use for condensed and evaporated milk products.
3. These guidelines apply particularly to all forms of food aid programmes.

#### **B. POSSIBLE USES OF MILK PRODUCTS:**

4. Infant formulas replacing breast milk can be used for medical reasons on prescription only; they are only allowed for hospital use and take-home rations. To be provided with clear instructions for preparation and use

in cup and spoon–feeding, under the guidance of medically trained professionals. Other uses for Infant Formulas are not permitted.

5. DWM or DSE (the latter preferably together with oil) can be used as liquid high energy/high protein food for rehabilitation of malnourished children (and convalescent patients in exceptional cases). For hospital use only.

6. DWM or DSE can be used for take–home rations only by populations for whom milk is traditionally an essential part of the diet (pastoral nomads). Adequate instructions for safe use and precautions against use as breast milk substitute or bottle feeding have to be provided. In all other situations the use of DWM or DSE for take–home rations is not allowed.

7. DSM can be used in feeding programmes for pre–school children as a protein–rich component of blended foods, mixed before distribution, only in situations where no local alternative is available and milk use will not disturb food habits. The blend should not contain more than 10% DSM in weight. Blended foods for on–the–spot feeding and take–home rations are allowed provided that clear instructions for preparation are given.

### C. USE OF ALTERNATIVES

8. The use of DWM or DSM/oil as recombined/reconstituted milk for on–the–spot feeding has to be discontinued and replaced by the use of blended foods.

9. In feeding programmes for weaning children or preschool children, either for on–the–spot feeding or for take–home rations, high energy/protein porridge mixes are highly suitable commodities, because the target groups are easy to identify. These porridge mixes should consist of blended foods, mixed before distribution. Excellent recipes based on local commodities are available in the literature. Blended foods with or without milk powder are available from processors in industrialized and developing countries. Preference must be given to local or triangular suppliers.

10. Feeding programmes for pregnant and nursing mothers and convalescent patients should supply (potentially) indigenous commodities like cereals enriched with pulses, oil, fish or meat, to provide the additional energy and protein. There is no need for milk products in these cases.”

(Source: Guidelines for the Use of Milk Products in Food Aid Programmes Proposed by the Netherlands Government (1990), The Hague. Additional copies can be obtained from: Ministry of Foreign Affairs, DST/TA, PO Box 20061, 2500 EB The Hague, Netherlands.)

### **The Medford Declaration to End Hunger in the U.S.**

We can end hunger in America, and we can end it now.

Three decades ago a new President challenged our nation with two goals: to reach the moon and to end domestic hunger. We have reached only one of these goals. It is time to achieve the other.

Hunger has no place in the new world tomorrow brings. It is a form of economic suicide. Hunger is also inconsistent with our conscience. If anything is un–American, it is hunger.

We believe Americans have reached a consensus on ending hunger. We come to this consensus from many points of view.

Many of us are moved by the belief that the United States is losing its economic leadership, and that we must invest more in our children and families to insure national productivity in a more competitive world. Others are moved by enlightened self–interest, pointing out that we either pay now or pay later for preventable problems.

Still other citizens address domestic hunger out of strong or religious convictions. And many in the fields of education and health are moved by the crippling impact of hunger on the health and learning capacity of our children.

From many walks of life, we are one people – a people who agree that we can eradicate hunger in our country. A people who believe we must do so.

### **Abolishing hunger at home will require two steps.**

In the short term, we must use existing channels to see that food is available to the hungry on an adequate and consistent basis. If we fully utilize existing public programs in conjunction with the heroic efforts of voluntary food providers in local communities we can end hunger very soon.

But we must move as a nation to end the causes of hunger as well. Many things can be done to increase the purchasing power of American households, and to fulfill the desire for independence and self-reliance which so characterizes our people.

We can achieve this two-step goal before the start of the new century.

### **We can begin with children...and we can virtually eliminate domestic hunger by 1995.**

Programs exist to insure that all Americans have enough to eat by 1995. Within months we can meet emergency needs by moving surplus foodstuffs into the communities of the nation as quickly as we ship goods to feed our military personnel overseas. Within two years we can fully use existing federal food programs to prevent hunger.

We must begin with children. We can reach every needy child with the school lunch and breakfast program. We can start with the six million poor youngsters who often begin their school day with no food. We can fully use the highly effective Women, Infants and Children (WIC) program to help insure that poor mothers do not give birth to undernourished babies – protecting four million more youngsters who presently are at risk.

We can expand the benefits of food stamps which help unemployed households make it through economically difficult times. And we can insure that no elderly citizen goes without the nutrients provided by Meals on Wheels and congregate feeding.

These steps alone can virtually wipe out domestic hunger by mid-decade.

### **We can achieve economic self-reliance for most American households by the year 2000.**

Promoting adequate purchasing power is the way to achieve the goal of a hunger-free United States. This nation will have defeated chronic hunger when its people achieve “food security” – regular access to an adequate diet through normal means.

A variety of steps can be taken this decade to accomplish this end: market-based employment and training programs to build skills and expand jobs; making sure child care is available so parents can work; expanding concepts such as earned income tax credits and children's allowances so that the tax system strengthens families. The goal is to increase the purchasing power of employed heads-of-households so that work raises families out of poverty.

The current window of world peace now gives us the opportunity to abolish domestic hunger. We can increase the competitiveness of our work force and protect the vital energies of our young. And we can assist emerging democracies of the world with pride because all Americans will enjoy the most basic fruit of our own democracy – freedom and family security.

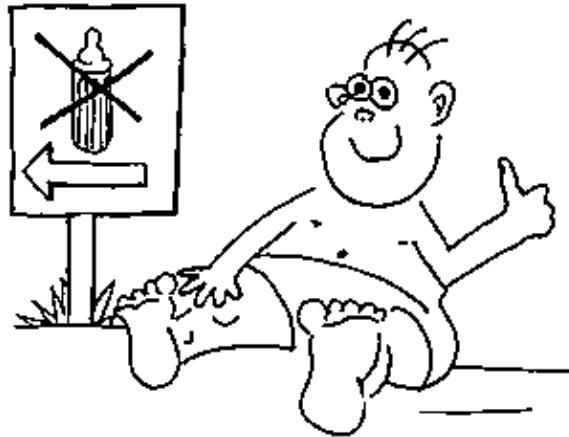
We stand at a special moment in history. Perhaps for the first time, our desire to end hunger is converging with the opportunity to do so. We have moved from ability to consensus. We now need the political leadership to achieve the long-held goal of an America free of hunger.

*Source: Center on Hunger, Poverty and Nutrition Policy, Tufts University, Medford, USA*

### **World Breastfeeding Week – Making Hospitals Baby Friendly**

On the second anniversary of the Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding (see SCN News No. 6), the World Alliance for Breastfeeding Action (WABA) with the support of the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) declared 1–7 August, 1992 “World Breastfeeding Week”.

The theme this year complemented the “Baby-Friendly Hospital Initiative” (BFHI) launched by UNICEF and WHO in March 1992. The BFHI is a worldwide drive to promote breastfeeding of infants on a national scale and to terminate the supply of free and low-cost infant formulas to maternity centres and in the first reaction to this initiative more than 50 hospitals and maternity institutions in 12 countries (Bolivia, Brazil, the Ivory Coast, Egypt, Gabon, Kenya, Mexico, Nigeria, Pakistan, the Philippines, Thailand and Turkey) have made a commitment to support and protect breastfeeding.



Breastfeeding is the only natural method of infant feeding, is crucial for the physical and psychosocial well-being of the young child, helps in birth-spacing and protects women's health. Yet, some medical doctors, health workers and mothers had come to regard breastfeeding as a nuisance, and its practice had declined.

The aim of this initiative is, therefore, to mobilize health care services and staff to promote and support breastfeeding and to create a demand by women for hospitals that encourage breastfeeding. The long-term goal is to contribute to the attainment of the breastfeeding goal for the 1990s outlined in the Declaration and Plan of Action and adopted at the 1990 World Summit for Children. The Declaration stated that “all women should be enabled to practice exclusive breastfeeding and all infants should be fed exclusively on breastmilk from birth to 4–6 months of age.” It also added that children should continue to be breastfed past their second birthday “while receiving appropriate and adequate complementary foods.”

Collaborations between WHO, UNICEF, the International Association of Infant Food Manufacturers and individual companies have led to a commitment by industry to end free or low-cost supplied of infant formula to maternity wards and hospitals in all developing countries. The twelve above-mentioned countries ended supplies in 1991, and whilst WHO and UNICEF regret that there appear to be failures to comply in some countries, both agencies expect that there will be full enforcement of government bans in developing countries by June 1993.

The next step will then be to end free and low-cost supplies of infant formula that contribute to routine bottle-feeding in health care facilities in industrialised countries. “It is our fervent hope that this important goal can be met in all countries with the cooperation of all interested parties including the infant food manufacturers and distributors, by June, 1994” said UNICEF Executive Director, Mr James P Grant and WHO Director-General, Dr Hiroshi Nakajima. Mr Grant added “the extremely positive news for children and women everywhere at the close of 1992 is that the world has clearly navigated the turn back towards breastfeeding. The vast majority of the world's children will now be born into societies that, by government policy, protect every mother's right to give her child the best possible start in life.”

(Source: WHO Press releases, 13 March 1992, 31 July 1992 and 2 February 1993)

### **Positive Trends in Breastfeeding**

“A study by the Institute of International Studies in Natural Family Planning (Georgetown University), which compares results from recent Demographic and Health Surveys and the World Fertility Surveys of the 1970s, concludes that despite increases in the level of urbanization, women's education, and use of contraception, the percentage of children ever breastfed and the duration of breastfeeding remain stable in most of the 15 countries surveyed. Urban and more educated women are now breastfeeding for substantially longer periods than previously, while there has been a small decline in the duration of breastfeeding among rural and less educated women. Six of the countries show an increase of three or more percentage points in the proportion

of children ever breastfed. Two countries (Ghana and Trinidad and Tobago) show an increase of more than two months in the length of time children are breastfed.”

(Source: World Bank, November 1991)

“He has been a strong boy since infancy. He breast-fed until he was two years old”

84-year-old Klavdiya Valisyevna Yeltsina, on her son, Russian President Boris Yeltsin, in “Semya”, Moscow.

(Source: *World Press Review*, September 1992)

### **New Chief for WHO Nutrition Unit**

On 6 November, 1992, the Director General of WHO announced the appointment of Dr Graeme Clugston as Chief of the WHO Nutrition Unit. Dr Clugston was previously medical officer in the nutrition unit, and before that Regional Nutrition Officer for South East Asia, based in New Delhi. He replaces Dr A Pradilla, who retired in July, 1991.

(Source: *WHO Information Circular* No. 90, WHO, Geneva)

### **Executive Director of ICCIDD becomes New Lieutenant-Governor of South Australia**

Dr Basil Hetzel, who since 1986 has been the Executive Director of the International Council for the Control of Iodine Deficiency Disorders, was appointed on May 28, 1992 as Lieutenant-Governor for the State of South Australia. On announcing the appointment the Premier, Mr Bannon, said Dr Hetzel had made a significant contribution to the field of public health both within Australia and internationally.

(Source: *The Advertiser*, Adelaide, 1 April 1992)

### **Pinstrup-Andersen Named Director General of IFPRI**

The Board of Trustees of the International Food Policy Research Institute (IFPRI), after an extensive and worldwide search, named Per Pinstrup-Andersen Director General of the Institute, effective from July 1, 1992. He succeeds Just Faaland, who retired from IFPRI last summer. Pinstrup-Andersen, a native of Denmark, was previously director of the Cornell Food and Nutrition Policy Program and professor of food economics at Cornell University.

(Source: IFPRI press release, October 10, 1991)

### **Jelliffes Foundation and Award**

“The Jelliffes Foundation and Award have been established in admiration of the great pioneering work of the late Professor Derrick B Jelliffe and his widow E F Patrice Jelliffe in promoting the health and wellbeing of the world's infants and children, and in gratitude for the unfailing support and encouragement which the Jelliffes always extended to others who were trying to work for the same cause.

“The purpose of the Award is to continue the Jelliffes' lifelong action by supporting young persons who are doing valuable work for the health and nutrition of infants and children, and for enabling mothers to breastfeed.

“In the first phase, from 1 December 1992, appeals for contributions to the Foundation will be sent through various networks and channels to friends and admirers of the Jelliffes.”

For further information contact: Dr Elisabet Helsing, WHO Regional Office for Europe, 8 Scherfigsvej, DK-2100 Copenhagen, Denmark.

(Source: WHO EARPRO Announcement, 1 December 1992)

### **Folic Acid Supplementation Recommended to Prevent Birth Defects**

In September, 1992, the United States Public Health Service issued a recommendation that all women of childbearing age should supplement their diets with extra folic acid, a B vitamin – a measure which could prevent the neural tube defects that occur in 1–2 of every 1000 babies born every year. This was the first time that a regular supplement has been recommended in this way.

It has long been suspected that folic acid is associated with neural tube defects – but it is claimed that the results of a Hungarian study (as yet unpublished) on a random sample of women who had not had a previous child with a neural tube defect, have shown that low doses of folic acid can prevent neural tube defects in the babies of these women.

Neural tube defects include anencephaly, where much of the brain is missing, and spina bifida, which results in paralysis of parts of the lower body. Spina bifida can be accompanied by hydrocephaly, a defect which prevents fluid from draining properly from the skull, sometimes causing mental retardation.

Such defects can occur as early as the second week after a missed period, when many women are unaware they are pregnant, which is why it is recommended that *all* women of childbearing age should take 0.4 mg of folic acid per day.

Dr Steven Laubacher, executive director of the Spina Bifida Association of America said of these findings: “at our organization, we try to discipline ourselves to be reserved. But this points in the direction of a major, major breakthrough”.

(Source: *The New York Times*, 15 September 1992)

### **Vitamin C and Mortality**

Recently published survey findings appear to lend support to two hypotheses concerning vitamin C: that this vitamin can play an important role in preventing cardiovascular disease, cancer and possibly other diseases; and that there are health benefits of intakes of vitamin C far in excess of usually recommended intakes, such as the US Recommended Dietary Allowance (RDA) of 60 mg/person/day.

Researchers at the University of California, Los Angeles, looked at whether the level of vitamin C intake had any effect on mortality rates amongst a nationally representative sample of 11,384 US adults aged 25–74. They began by monitoring the vitamin C intakes of the sample, both from food and supplement sources, during the early 70s. Deaths, and causes of death of the subjects were recorded over the subsequent 10 years. Each individual was then classified according to the amount of vitamin C consumed. The researchers used three possible levels of vitamin C consumption: (i) 0–49 mg; (ii) 50+ mg and no regular supplements, and (iii) 50+ mg and regular supplements. The number of deaths within each classification of vitamin C intake was counted and compared to the expected mortality rate amongst all US white adults.

Results showed that for those males in the highest category of vitamin C intake there were 35% less deaths than would be expected for all US white males. When the causes of death were isolated there were 42% less deaths from cardiovascular disease and 22% less deaths from all cancers than would be expected. The reduction in mortality was less marked in females.

In order to address the question of whether vitamin C was really responsible for these observations, the researchers controlled for ten other potential causes of lower mortality rates – race, history of serious diseases, education, cigarette smoking, exercise, alcohol consumption, calories, fat, cholesterol, and dietary vitamin A.

When all these factors were taken into account there were still significantly less deaths amongst males in the highest vitamin C consumption group than those in the lowest consumption group.

It is interesting to note that those in the highest intake group, who took supplements, were estimated by the researchers to be ingesting on average several hundred mg of vitamin C per day. Few surveys have as yet taken account of vitamin C consumed in such quantities in the form of supplements.

(Source: Enstrom, J.E., Kanim, L.E., Klein, M.A. (1992) Vitamin C Intake and Mortality among a Sample of the US Population. *Epidemiology*, **3**, 194–202.)

### **Folate Deficiency and Cervical Cancer**

After breast cancer, cervical cancer is the second most commonly occurring cancer in women worldwide. Deaths from the disease are largely preventable through early detection and treatment of the precursor “cervical dysplasia” (CD) – but in many developing countries, where adequate health care systems do not exist, mortality rates are often several times those in developed countries. Even where mortality is relatively low, detection and management of the disease places a heavy burden on health care systems, and so in all cases, a desirable alternative would be to prevent the cancer and its precursor from occurring at all. Many studies have thus concentrated on identifying the primary causes of the disease.

Much evidence has indicated that CD is caused by sexually transmitted infection with a strain of the human papillomavirus (HPV) – but the discovery that the virus does not *always* cause CD has led to the belief that other “host” factors may be involved, and risks associated with sexual and reproductive history, socioeconomic status, cigarette smoking, nutrition, immunity, and oral contraceptive use have been described by epidemiological studies.

A recent research project has looked at the role that nutritional deficiency may play in causing cervical dysplasia in young women. The researchers were particularly interested in folic acid deficiency due to reports that oral contraceptives can cause low blood folate levels. In addition, a 1982 study had noted beneficial effects of folic acid supplementation on women with mild or moderate CD and who were taking oral contraceptives. This study concluded that “either a reversible, localized derangement in folate metabolism may sometimes be misdiagnosed as cervical dysplasia, or else such a derangement is an integral component of the dysplastic process that may be arrested or in some cases reversed by oral folic acid supplementation.”

Using red blood cell (RBC) folate levels as an indicator of long-term nutritional status, the study found evidence that suboptimal reserves of folate (RBC levels below 660 mmol/l) are not *alone* significantly linked with increased risk of developing CD. In addition, in women with folate levels greater than 660 mmol/l, cigarette smoking, parity and HPV infection are not associated with a significant increase in risk. However, coexistence of multiple risk factors – low RBC folate concentrations, cigarette smoking, parity and HPV infection – *were* linked with increased risk of CD.

A biological explanation of the above findings may be that folate deficiency cannot by itself cause cervical dysplasia, but that cells deficient in folate may be more susceptible to the effects of carcinogens.

The authors are cautious about drawing firm conclusions about their findings, but suggest that replication of their study by independent investigators may be able to consolidate the existence of a link between folate deficiency and cervical cancer.

(Source: *JAMA*, Jan 22/29 1992 – Vol. 267, No. 4)

### **Vitamin A Therapy for Measles**

Measles is regarded in developed countries as a fairly banal, self-limiting disease of childhood. In developing countries, however, it is a significant cause of childhood mortality. In 1989, for example, 45 million children were afflicted by measles and 1.4 million died as a result – this, in spite of the availability of a highly effective vaccine. Measles case fatality rates in developing countries are 20 times those currently reported in developed countries.

Deaths from measles usually result from the complications of the disease which include pneumonia, diarrhoea and croup. Other complications of the disease such as blindness (half of all cases of corneal blindness in Africa are directly linked to measles), otitis media, encephalitis and growth failure often result in permanent disabilities. The long-term and hitherto underestimated impact of measles is also serious because even if the child survives the measles attack, it has a ten-fold risk of contracting other infectious diseases and dying.

Measles complications are worsened as a result of the lowered levels of serum Vitamin A which occurs during infection with measles. Vitamin A functions, presumably, by protecting the immune system and epithelial tissue. When they fall below a certain critical threshold, the epithelial surfaces of the eye and the respiratory and gastrointestinal tracts lose their integrity, thereby allowing invasion of the measles virus and pathogens. The result is eye damage and eventual blindness, diarrhoea, pneumonia, croup and otitis media.

Recent studies in Africa have demonstrated that Vitamin A therapy reduces the death rate and complications of measles by about half. WHO, UNICEF and the International Vitamin A Consultative Group have issued guidelines on the routine administration of oral Vitamin A supplements to children. Two doses of 200,000 IU each are recommended for children 12 months or older: one at diagnosis and the other on the following day.

Half the dose (100,000 IU each) is recommended for children 6–11 months of age or weighing less than 8 kg.

There are no special technical skills or experience necessary for the administration of Vitamin A supplementation, the operational requirements are few and the costs are minimal. A Vitamin A programme would, therefore, easily lend itself to being incorporated into existing primary health care structures. The Vitamin A Field Support Project, VITAL, is working to achieve this by formulating a Measles Training Module. “The package will contain information on: measles case management; an annotated bibliography of the scientific basis for Vitamin A in measles; training slides and accompanying text; a Vitamin A and measles treatment wall-chart; and information on Vitamin A procurement and maintenance of supplies.”

(Source: *VITAL News*, March 1992, Vol. 3, No. 1. For further information contact: VITAL, 1601 N. Kent Street, Suite 1016, Arlington, VA 22209, USA)

### **Fighting Micronutrient Deficiency with Double Fortification**

A large proportion of the world's population, mainly in developing countries, is affected by deficiencies in micronutrients such as iron and iodine which result in problems of serious public health significance. Inadequate intakes of iodine lead to Iodine Deficiency Disorders, the manifestations of which are mental retardation, cretinism, goiter, deaf-mutism, short stature and an increased risk of death in childhood. Iron deficiency results in impaired immune response culminating in a higher incidence of infectious diseases, increased risk of maternal and foetal morbidity and mortality. Food fortification is one feasible prophylactic intervention for supplying the human organism with trace quantities of these important micronutrients, and salt is one of the most suitable vehicles because its consumption is universal, consistent and its sources of production are easy to regulate.

The technologies for the separate fortification of salt with compounds of iodine and iron have existed for over 60 and 20 years, respectively. However, double fortification is a relatively new concept. The challenge is to develop a formulation which is stable under various cooking, storage and environmental conditions, bioavailable, palatable, with good retention of nutrients, and affordable.

Stability is probably the most difficult exercise because the iodide and iodate salts are stable in an alkaline medium whereas iron is stable under acidic conditions. On mixing, the iodide/iodate is oxidized to free iodine which is lost as vapour. Two approaches towards stabilisation have been tested in India. The first uses a chelating polyphosphate to secure the stabilization of the compound mixture. The second relies on the identification of stable, neutral iron salts which are compatible with potassium iodide or iodate in a slightly alkaline medium. Both formulae require further testing to establish stability under various environmental conditions and bioavailability after cooking and prolonged storage. On satisfactory completion of these tests, community trials will have to be conducted to determine acceptability and efficacy of the fortified salt.

Salt quality is another technical requirement which is important. There are varying grades of feed salt and in order for it to be used in the double fortification process it must conform to certain minimum purity specifications. It must be dry and refined in order to avoid hydrolysis and ensure stability. Several developing countries will therefore need either upgrading of or complete introduction of refining, drying and packaging facilities before a double fortification programme can be integrated into the system. This has serious cost implications of capital investment which would increase the price of salt by as much as 25% – 200%, a price which would simply be unaffordable for consumers in many developing countries.

Even though the long-term health benefits accruing from iron and iodine fortification would far outweigh the actual expenditure, cost is a real determining factor in the consumers decision to buy the product. A double fortification programme would therefore need to resort to innovative economic and market incentives in order to increase the financial feasibility of the programme.

(Source: Report by M. G. Venkatesh Mannar to UNICEF, September 1991)

### **Bellagio Conference on Vitamin A Deficiency**

Following the call by the World Summit for Children and the WHO/UNICEF Conference “Ending Hidden Hunger” for a reduction in childhood blindness and mortality by the worldwide control or elimination of vitamin A deficiency, scientists and health officials met at the Rockefeller Study Centre in Bellagio, Italy in February 1992 “to evaluate the scientific basis for these objectives and to examine the policy implications.” The meeting was chaired by Professor Abraham Horwitz, Director Emeritus, Pan American Health Organization, and Chairman ACC/SCN.



The following is extracted from a report by Dr Alfred Sommer on the meeting, published in the Lancet.

“Meeting participants unanimously concluded:

- Vitamin A is essential for normal health and survival.
- Vitamin A deficiency increases mortality among children from 6 months to 6 years of age; improving the vitamin A status of deficient children increases their chance of survival.
- Vitamin A deficiency increases the severity, complications, and risk of death from measles. Improving vitamin A status before the onset of measles (prophylaxis), or after development of measles (treatment), reduces the severity of complications and associated mortality.
- Vitamin A deficiency increases childhood morbidity, particularly the severity of infectious episodes (eg, diarrhoea, pneumonia). Improvement of vitamin A status reduces the severity of infectious episodes.
- Vitamin A is essential for normal vision and ocular function. Deficiency results in nightblindness and other manifestations of xerophthalmia, including corneal destruction (keratomalacia) and blindness.
- Increased morbidity and mortality occur at levels of vitamin A deficiency less severe and chronic than required for nightblindness and xerophthalmia. Therefore, the definition of vitamin A deficiency for public health purposes must be revised and made more sensitive to milder degrees of deficiency.
- Tens of millions of the world's children are vitamin A deficient; one million or more needlessly die or go blind every year.
- Improving the vitamin A status of deficient children and treating all cases of measles with vitamin A, even in populations in which xerophthalmia is rare, can substantially reduce childhood disease and mortality.
- Increasing the vitamin A intake of deficient children through diet or supplementation is an important component of a comprehensive child survival strategy.

“The above conclusions were based on consistent evidence from studies in animals and man and emerging data on vitamin A regulation of gene expression, cellular differentiation, and immune status:

1. Progressive depletion of vitamin A in animals results in alterations in cellular differentiation and immune function, followed by severe infection, death, and in animals surviving longest, blindness.
2. For over 60 years, clinicians have reported that vitamin A deficient children show histological changes of the respiratory and genitourinary tracts (among other organs) similar to those that precede xerophthalmia and an increased severity of infections that are responsive to vitamin A.
3. Childhood mortality has been associated with the severity of vitamin A deficiency, other factors apparently being equal, in both hospital and field observational studies.
4. The severity of measles complications and measles-associated mortality was reduced by at least 50% among children assigned supplemental vitamin A in hospital-based studies in England (1930), Tanzania, and South Africa, and in three community-wide prophylaxis studies in Nepal and India.
5. All six controlled community-based prophylaxis-mortality trials published in the past decade (two each in Indonesia, India, and Nepal) registered a reduction in mortality in the vitamin A groups. Pooling of the six trials (100,000 children and 1,000 deaths) in a meta-analysis yielded an overall reduction in childhood mortality (6 months to 6 years) of 34%. The impact observed in each was consistent with the 34% overall reduction. The probability that the vitamin A programmes reduced childhood mortality was highly significant.

The consistency of these findings was particularly persuasive in view of variations in the underlying mortality and other health indices of the study populations and differences in the design and conduct of the six trials.

6. Cause-specific mortality was examined in three of the community-wide mortality intervention trials; in all three, there were striking reductions in deaths associated with diarrhoea (the major cause of death in children over 5 months of age) and measles.

7. In a study specifically designed to detect the impact on severity of subsequent infections (Ghana), vitamin A supplementation reduced the natural severity of both diarrhoea and pneumonia.

“Although the precise mechanisms by which vitamin A exerts its impact on mortality are yet to be determined, vitamin A is known to affect the expression of at least three hundred different genes, which in turn affect cellular differentiation, epithelial integrity, and immunological functions.”

(Source: *The Lancet*, April 4, 1992, Vol. 339)

### **Successful Control of Children's Iron Deficient Anemia Through Fortified Drinking Water**

Iron deficiency anaemia may be considered the most common nutritional disorder in the world affecting over one billion people, mainly in developing countries, although it also occurs in developed ones. It has severe nutritional and health consequences, impairing social and economic development. Use of iron tablets and food fortification to fight iron deficiency anaemia, although effective, has shown a coverage far short of requirements. A more available and widespread iron carrier is therefore needed, and researchers in Brazil have been working with drinking water as such a vehicle.

After physical-chemical and rat assays with iron enriched water, ferrous sulfate was added to the drinking water of a preschool day-care institution, in a trial that lasted one year. 30-50 preschool children, 2 to 6 years old were observed. Blood samples for haemoglobin determination were obtained from an arm vein. The initial blood sample was obtained from a group of 15 children and later a further 16 were added until the end of the experiment. Fine iron sulfate crystals were added to the drinking pot to supply 20 mg of elemental iron for each litre of water. The children had access to this water ad libitum and their mean intake was around 500 ml/day. Five and eight months after the iron addition two other blood samples of the same children were collected.

The initial mean haemoglobin level for the 31 children was 10.6 g/dl with 18 of them having values below the cut-off level for anaemia of 11.0g/dl. After five months' intake of enriched water, the mean haemoglobin was 12.1 g/dl with just one child with Hb less than 11.0 g/dl. The researchers concluded that “our data confirms the possibility of using drinking water as an iron carrier to deal with iron anaemia at community level. It is an easy, effective and practical way to supply iron and other nutrients to population groups”.

(Source: Contributed by J.E. Dutra-de-Oliveira, MD, Valeria P Vasconcelos, BS, Jacob F Ferreira, BS. Medical School Ribeirao Preto, University of Sao Paulo, 14049 Ribeirao Preto, SP, Brazil.)

### **Fact Sheet on Sex Differences in Health**

The following quotes are taken from “Women's Health: Across Age and Frontier”, a background document for “Women, Health and Development” technical discussions at the 45th World Health Assembly.

- “Women's nutrition is a critical part of their overall health status. It is related among other things, to food intake during their lifetime, the nourishment they received before birth, their energy output and workload, their control over resources for household food security, and their roles in the food chain.
- “Households headed by women are the most economically disadvantaged. The growing numbers of these households and of single-parent families will aggravate conditions of poverty in both developed and developing countries.
- “A report from Bombay in 1984 on abortion after prenatal sex determination stated that 7999 out of 8000 of the aborted fetuses were females.

- “Studies in Bahrain, Oman, Tunisia and other countries show that the duration of breastfeeding is longer for boys; some studies in Latin America show that complementary feeding is begun earlier for boys than for girls.
- “Studies in Thailand, the Philippines and other countries show that the incidence rates of acute respiratory infection and of lower respiratory tract infection were only slightly higher for boys in community surveys, whereas many more boys than girls were found with those infections as inpatients or outpatients in hospitals.
- “Analysis of sex-specific mortality by cause in Latin America revealed an excess female mortality among children aged 1 to 4 years, with disproportionately more girls than boys dying from diseases preventable by immunization.
- “Major long-term complications of genital mutilation (female circumcision) include gynaecological, urinary, obstetric and marital problems. Millions of girls in many countries have undergone this procedure.
- “Studies of work patterns of men and women reveal differences in exposure to health hazards. Certain health hazards are particularly linked with women's roles, such as the burning of biomass fuels used in cooking and heating inside homes, the carrying of heavy loads of water or firewood, and use of household chemicals.”

(Source: Women's Health: Across Age and Frontier, WHO 1992)

### **The Last of the Smallpox Virus**

In perhaps a very short time the smallpox virus which for many years claimed millions of lives will become truly extinct. The last episode of variola virus circulating in the wild was identified in October 1977 and today the only repositories for captive virus stocks are the Centres for Disease Control in Atlanta and the Research Institute for Viral Preparations in Moscow. Scientists at those institutions are working to identify the genetic sequencing of various strains of the virus and once this is completed, the international scientific community has given its consensus that the virus stocks be destroyed.

The CDC scientists have already sliced the DNA of a particularly virulent strain of the virus and inserted them into loops of bacterial DNA called plasmids. This facilitates study of the genetic code. The information thus obtained is stored on computer file and will ultimately be published.

The initiative to destroy the virus stores originated from developing countries who were uncomfortable at the thought that they were in the possession of superpower nations only. Those stocks at CDC actually belong to the U.S. Army, the Netherlands, Japan and England while those at the Russian institute are owned by the former Soviet Union, Brazil, India, Ethiopia and several other African and Asian countries.

To date, there have been no opposing arguments to what would be an unprecedented, intentional destruction of a life form from the universe. What also goes without argument is that the majority of the world's population is likely to have little or no protection from the disease. Routine vaccinations against smallpox terminated in the United States in 1971 and immunity starts to wane after about 10 years so people who have been vaccinated may no longer be protected. Cohorts born after the end of vaccination programmes have no immunity at all. The smallpox virus thus has the potential to trigger a worldwide catastrophe on a scale never before realised and its extinction would leave little regret.

(Source: *International Herald Tribune*, 14 May 1992)

### **HIV and Breastfeeding**

“The breast-feeding of babies should be promoted and supported in all populations, irrespective of HIV infection rates.” This was the recommendation of a World Health Organization (WHO)/United Nations Children's Fund (UNICEF) consultation meeting which met in May, 1992, in Geneva to discuss HIV transmission and breast-feeding.

Approximately one-third of the babies born worldwide to HIV-infected mothers become infected themselves. Much of this mother-to-infant transmission occurs during pregnancy and delivery, although recent data confirm that breastfeeding is another route by which some transmission takes place. Fortunately, the great majority of babies breastfed by HIV infected mothers do not become infected through breastfeeding.

After carefully considering all the data currently available, the consultative group concluded that where infectious diseases and malnutrition are the main causes of infant death and the infant mortality rate is high, breastfeeding should be the usual advice to pregnant women, including those who are HIV infected. This is explained on the grounds that a baby's risk of HIV infection through its mother's breast milk is likely to be lower than its risk of death from other causes if it is not breastfed. Women in such circumstances who know that they are infected with the HIV virus and for whom alternative feeding might be an appropriate option, should consult their health care providers in making their decision on how to feed their infants most safely.

However, in settings where the main cause of death during infancy is not infectious diseases and the infant mortality rate is low, the advice to pregnant women known to be infected with HIV should be to use a safe feeding alternative for their baby rather than breastfeed. In these situations, voluntary and confidential HIV testing, including pre- and post-test counselling, should be available to women, and they should be encouraged to seek testing before delivery.

Stressing that when a baby must be fed artificially the choice of substitute feeding should not be influenced by commercial pressures, the group of experts called on companies to respect the International Code of Marketing of Breast-milk Substitutes. They agreed that in all countries, the first and overriding priority in preventing HIV transmission from mother to infant is to prevent women of childbearing age from becoming infected in the first place.

Technical and operational guidelines are being prepared by WHO in collaboration with UNICEF in light of the recommendations of the consultation, and the WHO Global Programme on AIDS is funding further research to learn more about the risk of HIV transmission through breastfeeding.

(Source: WHO Press Release, 4 May 1992)

### **Lead Poisoning – An Ever Present Childhood Threat**

Recent press coverage has brought back into focus the problem of lead poisoning. Health officials have recognised from as early as the 1920s that lead poses a significant threat to health and the environment. At low levels of toxicity, it causes stomach pains and disturbances in behaviour, perception and concentration. At higher levels it causes permanent brain damage and death. Its use in the production of paint and water piping has already been banned and its use in car fuel is being phased out. Nowadays household paint contains lead in very minute quantities or not at all, and copper water pipes are installed instead of lead ones. Why, then, does lead poisoning continue to pose a threat, especially to the young?

The sources of lead are both varied and many, and while toxic to life, in the manufacturing process lead is a very useful resource. It has unique properties of malleability, permanent shelf life (it never decays) and impermeability to water, electricity and radiation. It is used in the production of many everyday products, from bread bags to car batteries. It is still being expelled into the atmosphere from car exhaust fumes in countries like Greece and Portugal where unleaded gas is still a new concept, and from recycling smelters in developing countries like Brazil. Many old houses still have leaded-paint and lead water pipes in the plumbing.

Recent epidemiologic data has suggested that much lower blood lead levels in children than were previously thought can cause harmful effects including impaired development and lowered intelligence. Previously, health authorities believed that 400 microgrammes of lead per litre of blood was a safe threshold level, but the U.S. Centres for Disease Control recently issued new warnings that anything in excess of 10 microgrammes per litre of blood is dangerous – 40 times lower. This places at risk much of the population of inner city children living in old, crumbling buildings with peeling paintwork and those living in areas with antiquated water pipes. Cooking in and eating and drinking from some traditional pottery is also a hazard as acidic liquids will cause lead to leach out (only ceramics glazed at low temperatures in crude kilns are risky).

Lead poisoning continues because not enough is being done to prevent it. Prevention can be expensive – for example, in one region of Scotland, it was estimated that replacing lead pipes would cost 10 times the region's annual budget. In other instances, the issue has simply been ignored. Because it is widely assumed that lead poisoning is a malady of the past, many doctors do not look for it in their differential diagnoses.

The eradication of lead poisoning is possible even though the world will never be rid of the most abundant heavy metal in the earth's crust – what is necessary are stronger environmental laws, enforcement of these laws, lead screening as a regular part of children's check-ups and, more importantly, commitment on the part of all governments to tackle the problem.

(Source: *Newsweek*, 17 February 1992; *American Journal of Public Health*, 81 (6). 685–687, 1991)

## **IUNS Awards**



In recognition of her outstanding work and dedication to nutritional science, Dr Barbara Underwood has received two awards from the International Union of Nutritional Sciences (IUNS) – the 1992 AIN Conrad A Elvehjem Award for Public Science in Nutrition and the 1992 Borden Award in Nutrition.

“The AIN Conrad A Elvehjem Award for Public Service in Nutrition, made available by Nabisco Brands, Inc. is given in recognition of Dr Underwood's long-standing dedication to the improvement of health in populations around the world through research and development of effective nutrition practices and policies. With a particular focus on the eradication of Vitamin A deficiency states, she has journeyed to many countries to serve as a consultant and to conduct collaborative studies... Dr Underwood had made a most important contribution to the assessment of vitamin A status in the community by her design of the retinol dose response method to estimate vitamin A liver reserves in vivo. The stimulating impact of her work is felt at both the national and international level.”

“The Borden Award in Nutrition is made available by the Borden Foundation and recognizes distinctive contributions to knowledge on the nutritional significance of any food or food component. Dr Underwood helped to develop a variety of improved methodologies for the assessment of nutritional status in regard to vitamin A in humans. Of particular note is the relative dose response test (RDR) which she developed and validated in a variety of clinical groups. Her work has helped define the impact of subclinical vitamin A deficiency in children on a worldwide basis and reinforced the continuing importance of nutrition in public health programs.”

Dr Underwood is currently on secondment from the NIH to the WHO Nutrition Unit.

(Source: *IUNS Nutrition Notes*, March 1992)

## **Cooperation in Food Science and Technology**

The European Federation of Food Science and Technology, EFFoST, is a focus for European cooperation in this field. Its aim is to fulfill the needs of specialists seeking to identify European colleagues working in the area of food science, engineering and technology. EFFoST collaborates with national organizations active in these fields on a voluntary, not-for-profit basis and is also linked to the International Union of Food Science and Technology. By facilitating contacts throughout the entire European continent, EFFoST can foster closer collaboration between industry and government as well as the relevant professions and national societies.

EFFoST is in the process of developing a current awareness bulletin about future meetings planned by societies across Europe; a database of meetings that can be consulted to avoid conflicts of timing and subject matter; the means to offer information and independent, professional opinion to the European Commission and other national and international bodies; a directory of research, education and training; and workshops to explore European opportunities and future developments.

If you wish to be informed of the future activities of EFFoST, please write to the EFFoST Secretariat, SCI, 14/15 Belgrave Square, London SW1X 8PS, United Kingdom.

(Source: As quoted in the text)

### **1992 Nathalie Masse Prize**

Dr Hernan Delgado, Director of the Institute of Nutrition of Central America and Panama (INCAP) in Guatemala, was the winner of the 1992 International Nathalie Masse Prize. The 50 000 FF cash award is given by the International Children's Centre in Paris to a person under 50 years of age who has conducted, alone or as a team leader, significant research on behalf of poor children, preferably in developing countries.

Dr Delgado, a native of Chile, joined INCAP in 1972 and became its director in 1990. He holds an M.D. from the University of San Carlos in Guatemala and an M.P.H. from the Harvard School of Public Health. Dr Delgado donated the award to INCAP's endowment fund.

### **Intrahousehold Resource Allocation Conference**

The Conference on Intrahousehold Resource Allocation, jointly organized by the International Food Policy Research Institute and the World Bank, was held in Washington, DC, USA, from 12 to 14 February, 1992. The conference aimed to address two questions fundamental to poverty alleviation programmes and policies: (i) How can more complete information about intrahousehold resource allocation mechanisms alter policy design and, thus, enhance policy impact? and (ii) How can this information be obtained? The multidisciplinary conference – participants included economists, sociologists, anthropologists, and nutritionists, among others – addressed the following topics.

1. How best to characterize the web of economic and social relationships that surrounds the individual? A household may be an adequate characterization of this web in Latin America and Asia, but in Sub-Saharan Africa, family or kin may be more appropriate. This non-overlap of household and family was a recurring theme. It was also agreed that whatever the most appropriate characterization of the "web," it had to be rooted in a wider community context.
2. How to analyze the web of relationships? The conference repeatedly emphasized the importance of multidisciplinary approaches to study the household, but how to best achieve that was less clear. The economist's reliance on deductive and quantitative techniques as opposed to the anthropologist's reliance on inductive and qualitative techniques was stressed. One promising area for future collaboration could involve the use of information on topics such as "respect," incidence of domestic violence, and strength of the legal environment, that is collected in a qualitative manner and yet is acceptable to econometricians.
3. The economics of the household/family. The economist's initial view of the household – pioneered by Gary Becker 25 years ago as essentially altruistic and harmonious – has gradually weakened. There are simply too many empirical examples of within-household inequality that are hard to square with altruism. A long-overdue clarification of terminology such as "altruistic" and "bargaining" models, and a sense of the narrowness of the Becker "harmony" view of the household was achieved at the conference.
4. Policy relevance. The standard question associated with these within-household issues is no longer "does development stop at the door of the household?" but, rather "does the design of development policy stop at the door of the household?" Even this is a somewhat redundant question, as there are ample examples of the unintended effects of policy on different individuals within the household/family. If policy design has unintended effects, can it achieve intended effects? The answer will depend on the availability of individual level information for at least a sample of the affected individuals.

The conference stressed the importance of realizing that a particular intra-family allocation of resources has efficiency as well as equity implications for policy.

Abstracts of the 22 papers presented at the conference have been collected together in a volume of conference briefs that can be obtained from Dr. Lawrence Haddad, IFPRI, 1200 17th Street, NW, Washington, DC 20036, USA. Fax: 202-467-4439. Tel: 202-862-5600.

(Source: IFPRI, June 1992)

### **Food Insecurity and Malnutrition Workshop in Central America.**

In June 1991, the International Food Policy Research Institute (IFPRI) in collaboration with the Food Security Program of Central America (CADESCA/EEC) organized a regional workshop on Measures to Reduce Food Insecurity and Malnutrition in Central America. This workshop, held in Costa Rica, provided a rare opportunity for different agents of change to sit down together and engage in a productive dialogue on food security and nutrition issues. Participants came from Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua. They included farmers' representatives; technical personnel from public sector agencies and nongovernmental organizations; officials from planning, health, and agriculture ministries; and representatives of international and regional technical agencies.

The objectives of the workshop were four: (1) identify factors relating to food insecurity and malnutrition at regional, national, and local levels in Central America; (2) critically analyze existing food security and nutrition measures and identify realistic alternatives; (3) define mechanisms and actions to strengthen and consolidate the Central American food security network; and (4) define the critical elements for the formulation of food security and nutrition projects at all levels.

The workshop arrived at several key conclusions and recommendations: (1) structural adjustment policies should place more emphasis on human development and basic needs satisfaction rather than on maximization of economic growth without social equity; (2) free trade processes in food, self-sufficiency in basic foods, and the role of food aid on food production should be analyzed within the Central American context to acquire a better understanding of these processes to promote regional integration with the aim of achieving national food security; (3) the public sector, private enterprise, nongovernmental agencies, and grassroots popular organizations should be seen as equal partners in the development process, and conditions to that effect should be created and strengthened; (4) planning, execution, and evaluation of food security and nutrition programmes and projects should be undertaken by popular grass-roots organizations, local governments, and nongovernmental organizations; (5) food security and nutrition projects should be designed and executed on a small-scale for maximum impact and should fully take into account local diversity in social, economic, cultural, and ecological constraints; (6) popular education and communication methods should be widely employed to promote and strengthen culturally-based good habits, greater technical capacity, and organization at grass-roots levels; and (7) programmes and specific projects should focus on assisting smallholder farmers with obtaining greater access to land, credit, appropriate technical assistance, training, organizational skills, efficient marketing systems, and rural infrastructure such as roads and small-scale irrigation works.

Through the inclusion of grass-roots organizations from five countries, the workshop provided a forum for the interaction between those who formulate and implement policies and those who are usually at the receiving end of top-down policies and programmes.

For more information, contact Dr. Maarten Immink, IFPRI, 1200 17 Street NW, Washington, D.C. 20036-1998, USA. Fax: 202467-4439. Cable IFPRI. Tel: 202-892-5600.

(Source: IFPRI, June 1992)

### **Congress on Obesity Management**

Science will meet practice in Antwerp, Belgium, the venue of an international congress on the management of obesity organized by Obesitas Inc., with the co-sponsorship of the World Health Organization and the Ministry of Health of Flanders. Two kinds of experts will assemble on the premises of the University of Antwerp from 19-22 September, 1993: first, obese people themselves and their organizations and, second, researchers, clinicians, specialists, psychologists, nurses, nutritionists, dieticians, physical therapists, and others interested in the management of obesity.

The aim of the congress is to give participants up-to-date scientific information about the causes and treatment of obesity; provide participants with an opportunity to exchange experiences; and, present researchers and clinicians with an opportunity to learn more about how the obese experience their own physical, mental and social situations. The scope of the congress ranges from scientific approaches to individual experiences and will thus focus on an epidemiological and sociological assessment of obesity in Europe; the economic aspects of various treatments, including formal and "alternative methods"; the cultural, socio-economic and psychological issues in the life of the obese and the potential of self-help groups or

mutual support groups, non-profit organizations, and health care facilities.

(For further information contact, Miep Bekkers-van den Hoven, Obesitas vzw, Bunderbeeklan 19, B- 2950 Kapellen, Belgium)

### **The Lactation Resource Centre**

Established by the Nursing Mothers' Association of Australia (NMAA), the Lactation Resource Centre (LRC) provides current information to people interested in breastfeeding. The LRC library, available to breastfeeding counsellors, health professionals, researchers, teachers, students and anyone else interested in lactation, contains over 7,000 journal articles, books and case histories. Staff trained in the biological and social sciences are on hand to help library users locate and interpret information, and although it is not usually possible to borrow material, there is a photocopying service available. Computer searches of the LRC database are available on a wide range of topics at minimal cost.

An annual subscription to the LRC costs \$60 (overseas subscriptions cost an extra \$30) and gives ready access to the LRC services plus, amongst other benefits, a subscription to *Breastfeeding Review* (the professional journal of NMAA) and an information pack entitled "Topics in Breastfeeding".

For more information contact: The Lactation Resource Centre (NMAA), PO Box 231, Nunawading, Victoria 3131, Australia. Phone: (03) 877 5011; Fax: (03) 894 3270.

(Source: LRC leaflet)

### **Current Research into Eating Practices – European Interdisciplinary Meeting**

The 16th annual scientific meeting of the Arbeitsgemeinschaft Ernährungsverhalten (AGEV) on the subject of "Current Research into Eating Practices: Contributions of Social Sciences" will take place in Potsdam, Germany, on 14–16 October, 1993. The general topic under discussion will be the development and present state of social science research in nutritional behaviour in Europe.

The programme will focus on basic research and concentrate on theories, models, strategies, data collection techniques, and results and deficits of nutritional behaviour research by social scientists.

Specific subject areas will be as follows.

- Sociodemographic and socioeconomic factors and their impact on nutritional behaviour.
- Economic and political factors and their impact on nutritional behaviour.
- Sociocultural determinants of nutritional behaviour.
- Psychosocial determinants of nutritional behaviour.

A special issue will be "Change as a Topic of Social Sciences: Impacts of Political, Economic and Social Changes in Eastern and Western Europe on Nutritional Behaviour".

The AGEV, in collaboration with the German Institute for Human Nutrition and the World Health Organization Regional Office for Europe, hopes to bring together at the meeting social scientists and nutritional scientists concerned with social science aspects of nutrition behaviour research.

(For further information contact: AGEV, Postfach 10 01 06, D-W-8200 Rosenheim, Germany. Phone and Fax: 49 (0) 8031 68467.)

(Source: AGEV leaflet)

### **Refugee Studies Programme – International Summer School**

The Refugee Studies Programme will – from 5–30 July, 1993, in Oxford, UK – hold a four week course for those who work with and for refugees and other forcibly displaced people.

The Refugee Studies Programme (RSP) was founded 10 years ago in 1982. It exists to increase understanding of the causes, consequences, and experiences of forced migration. To achieve this aim, it provides interdisciplinary research, training, publications and documentation on issues related to such migration.



The Summer School – designed for senior and middle managers who are involved with assistance and policy-making for forced migrants – will consist of four modules, each lasting a working week, and an additional, optional two-week private study programme. The four modules are:

- Refugees, International Relations, Assistance Agencies and Refugee Societies
- International Refugee Law
- Psychological and Social Aspects of Forced Migration
- Principles, Approaches and Issues in the Management of Refugee Assistance

(For further information on this and other courses and conferences organized by the RSP contact: Refugee Studies Programme, Queen Elizabeth House, 21, St Giles, Oxford, OX1 3LA, UK. Phone: (0865) 270723 Fax: (0865) 270721.)

(Source: RSP leaflet)



### **Low-Cost Newsletters and Journals of Interest to Nutritionists**

Nutrition Society: Task Force on Overseas Members

*The Nutrition Society (United Kingdom and Ireland) has produced a list of low-cost periodicals which it has asked SCN News to reproduce. This list may be photocopied. The Nutrition Society is unable, for financial reasons, to respond to requests for copies.*

### **Nutrition Information Sheet Number 1 (1992) Low-Cost Newsletters and Journals of Interest to Nutritionists**

The following English-language publications give up-to-date information on applied human nutrition. Most are free to individuals, institutions and/or libraries in "low-income" countries – but check before you order. Some publications are also free to workers in "industrialized" countries.

The Nutrition Society hopes to update this list in 1–2 years and so request readers to send copies of other relevant newsletters from their own countries or institutions to the Executive Secretary, Nutrition Society, 10 Cambridge Court, 210 Shepherds Bush, London W6 7NJ, UK.

## **PUBLICATIONS COVERING MAINLY NUTRITION**

*\* means the item is particularly recommended by the Nutrition Society*

### **BMAC Update**

– from Baby Milk Action, 23 St Andrew's St, Cambridge CB2 3AX, UK (breastfeeding, milk companies).

### **\*Breastfeeding Briefs**

– from International Baby Food Action Network/Geneva Infant Feeding Association, CP 157, 1211 Geneva 19, Switzerland (breastfeeding).

### **Cajanus**

– from Caribbean Food and Nutrition Institute, Box 140, Mona, Kingston, Jamaica (community nutrition, food policy, Caribbean).

### **C–H–O International Dialogue on Carbohydrates**

– from Advisa Medica, 526–528 Watford Way, London NW7 3YP – funded by the Sugar Bureau (carbohydrates, diet).

### **Food, Nutrition and Agriculture**

– from Food Policy and Nutrition Division, Food and Agricultural Organization, 00100 Rome, Italy (food, nutrition, food policy, food regulations).

### **IBFAN News**

– from International Baby Food Action Network, 310 E 38th St, Suite 301, Minneapolis, MN 55409, USA (breastfeeding, infant foods).

### **\*IDD Newsletter**

– from Dr J.T. Dunn, International Council for Control of Iodine Deficiency Disorders, Box 511, University of Virginia Medical Centre, Charlottesville, VA 22908, USA (iodine deficiency research, policies, country reports).

### **IFPRI Report**

– from International Food Policy Research Institute, 1200 Seventeenth St. NW, Washington DC 20036–3097, USA (food security, food policy, research).

### **\*Mothers and Children**

– from Clearing House on Infant Feeding and Maternal Nutrition, American Public Health Association, 1015 15th St NW, Washington DC 20005, USA (nutrition/health of children and women).

### **\*NFI Bulletin**

– from Nutrition Foundation of India, 13–37 Gulmohar Park, New Dehli 110049, India (nutrition research, programmes, India).

### **Nutrition News**

– from National Institute of Nutrition, Indian Council of Medical Research, Jamai–Osmania P.O., Hyderabad–500 007, A.P. India (for libraries only) (nutrition, India).

## **ORANA/VITAL**

– from ORANA, 39 Ave Pasteur, BP 2089, Dakar, Senegal (monthly bibliography on Vitamin A).

## **\*SCN News**

– from ACC/Sub-Committee on Nutrition, c/o WHO, 1211 Geneva 27, Switzerland (nutrition, UN agencies).

## **Vital News**

– from Vitamin A Field Support Project, 1601 N Kent St, Suite 1016, Arlington VA 22209, USA (vitamin A deficiency, projects).

## **Vitamin A News Notes**

– from Helen Keller International, 15 West 16th St, New York, NY 10011, USA (vitamin A deficiency, VAD projects).

## **Vitamin A Sieve**

– from Rodale Press Information Services, 33 E Minor St, Emmaus, PA 18098 USA (vitamin A, vitamin A deficiency).

## **\*Xerophthalmia Bulletin**

– from Dr D.S. McLaren, International Centre for Eye Health, 27 Cayton St, London EC1V 9EJ, UK (vitamin A, vitamin A deficiency).

## **PUBLICATIONS COVERING NUTRITION AND OTHER TOPICS**

### **African Farmer**

– from Hunger Project, 1 Madison Ave, New York, NY 10010, USA (food and farming).

### **Ageways**

– from Help the Aged, St James Walk, London EC1R 0BE, UK (old people).

### **AIDS Action**

– from Appropriate Health Resources and Technologies Group, 1 London Bridge St, London SE1 9SG, UK (AIDS).

### **ARI News**

– from Appropriate Health Resources and Technologies Group, 1 London Bridge St, London SE1 9SG, UK (respiratory infections).

### **Community Eye Health**

– from International Centre for Eye Health, 27–29 Cayton St, London EC1V 9EJ, UK (eye health).

### **Chetna News**

– from Centre for Health Education, Training and Nutrition Awareness, III Floor, Drive-in Cinema Building, Ahmedabad 380 054, India (woman/child health and feeding, community health care).

### **Children in the Tropics**

– from International Children's Centre, Chateau de Longchamp, Bois de Boulogne, 75016 Paris, France (child health).

## **Dialogue on Diarrhoea**

– from Appropriate Health Resources and Technologies Group, 1 London Bridge St, London SE1 9SG, UK (diarrhoeal diseases).

## **Food Chain**

– from Intermediate Technology Development Group (ITDG), Myson House, Railway Terrace, Rugby CV21 7HT, UK (food production, small-scale processing).

## **Footsteps**

– from Tear Fund, 100 Church Rd, Teddington TW11 8QE, UK (health, agriculture, development)

## **Glimpse**

– from International Centre for Diarrhoeal Disease Research, GPO Box 128, Dhaka 1000, Bangladesh (diarrhoeal diseases).

## **Health Action**

– from Appropriate Health Resources and Technologies Group, 1 London Bridge St, London SE1 9SG, UK (primary health care).

## **Health Lines**

– from Oxfam, 274 Banbury Rd, Oxford OX2 7DZ, UK (community health care).

## **IPPF Medical Bulletin**

– from International Planned Parenthood Federation, Box 759, Inner Circle, Regent Park, London NW1 4LQ, UK (family planning, mother/child health).

## **Mothercare Matters**

– from Mothercare Matters, John Snow Inc., 1616 N. Fort Myer Drive, 11th floor, Arlington, VA 22209, USA (maternal and neonatal health/nutrition).

## **RAP News**

– from United Nations Food & Nutrition Programme, 22 Plympton St, Cambridge MA 02138, USA (rapid assessment procedures).

## **Safe Motherhood**

– from Division of Family Health, World Health Organization, 1211 Geneva 27, Switzerland (maternal health).

## **\*State of the World's Children Annual Report**

– from UNICEF, 3 UN Plaza, New York, NY 10017, USA (child health and care, statistics).

Compiled by The Nutrition Society's Task Force on Overseas Members who thank everyone who contributed information especially the Appropriate Health Resources and Technology Group, UK.

## **IUNS NEWS – Update on the activities of the International Union of Nutritional Sciences**

### **15th International Congress of Nutrition**

The preparations for the 15th International Congress of Nutrition to be held in Adelaide, Australia, from September 26 to October 1, 1993 are underway. The Congress theme will be "Nutrition in a Sustainable Environment". It will include major Symposia on Nutrition Policies and Programs, Prevention of Chronic Diseases by Nutritional Means, Nutrition Through the Life Cycle, Nutrition and Nutritional Anthropology of Aboriginal Peoples, Cell Biology and Molecular Biology in Nutrition, Nutrition and Performance, Animal Nutrition, Food Science and Clinical Nutrition. A series of other Symposia and Workshops are also scheduled to happen during the Congress week.

### **Encouraging Research in Nutritional Sciences**

IUNS Commissions and Committees under the chairmanship of known experts are carrying on their tasks to encourage research and exchange of information in the nutritional sciences field, supervised by our 3 Vice-Presidents. Some of them are dealing with guidelines, references and policies. Others are reviewing the nutritional terminology in cooperation with IUPAC and IUB. Criteria for the use of animals and humans in research are the subject of other groups. Clinical Nutrition and Animal Nutrition are the themes of several other Commissions. Hopefully they will present their results at workshops available to them at the Adelaide Congress.

### **IUNS Fellows**

A project to recognize as IUNS Fellows persons who have made outstanding contributions in Nutrition Research, Development of Nutrition Science and/or worked for the advance of IUNS activities in different countries has been developed. Candidates may be proposed by the Adhering Bodies of IUNS, National Science Academy/National Nutrition Society/National Institution of Nutrition and IUNS Fellows. We expect the first IUNS Fellows to be awarded at the International Congress.

#### **Statement by Dr Jose E Dutra-de-Oliveira, President, IUNS, at the International Conference on Nutrition, Rome, December, 1992.**

"It is my privilege to address Dr Cortas as the noteworthy Chairperson of this Plenary Session, it is also an honour to salute Drs Saouma and Nakajima, Directors-General of FAO and WHO as the successful promoters of this great world event.

"The International Union of Nutritional Sciences (IUNS) is the largest non-governmental world organization dealing with the sciences of nutrition. Its scientific activities are carried out by investigators and academia in more than 60 countries.

"Members of our union have worked during the last 2-3 years along with FAO/WHO in the preparation of this meeting and several of them are here as active participants of this International Conference on Nutrition. We are certainly glad and at the same time sad to have the attention of the world directed towards the unacceptable hunger and malnutrition of millions of people who cannot use their right to eat every day the quantity and quality of food they need for a better quality of life. As specialists in nutrition we know how widespread are nutritional problems mainly in the developing countries, but also affecting the rich and industrialised nations. Being able to analyze the nutrition situation we know available solutions and feel ashamed they are not used.

"Governments and politicians are not always dealing straight-forwardly with the subject based on scientifically available information. So, we request the recognition of the scientific food and nutrition area as a goal by itself and a priority for social and economic development.

"Although science and research have been quoted a few times in this Conference, we would like to further stress the importance of the scientists in the solution of food and nutrition problems. And let us say that we deal with basic and applied science. For us, it is as important to discover the new role of a nutrient in the body's metabolism as to find a better way to deliver iron or vitamin A to the most needy in a community or country.

"We hope to have the recognition of the governments and the support of national and international organizations in the development of nutrition research and training. This is being done mainly in the rich countries but it is needed also in the developing ones. Research and training of scientists and specialists should be carried out not only abroad but also locally, inside each country. Scientists should be trained to deal with and to solve their own countries' nutrition problems. The joint work of governments, international

organizations and local scientists is a guarantee to the continuity and success of many local nutrition programmes.

“Governments and communities should value the importance of science and scientific work. Scientists are aware of the world nutrition problems. As scientists, we also want to be partners of their solutions. Time and money spent on scientific work pays off.

“Finally, I leave here an invitation to all countries and organizations to send their specialists to participate at our International Congress of Nutrition to be held in Australia next September. They will have the opportunity to be among 2000 scientists and learn what they are doing on basic and applied nutrition.

“I am sure that, together, we will reach sooner the solution to our present food and nutrition problems.”

*Source: IUNS, 1992*

### **IUNS Cooperating Nutrition Centres**

The establishment of IUNS Cooperating Nutrition Centres is another project under study in our Union. A group of scientists and professionals working in nutrition would apply for or be offered this status. Such a system would: (i) give encouragement to nutrition groups that do not have the chance to be so well known; (ii) list the most likely places where scientists from one country could obtain information about the nutrition and foods of another; (iii) provide better networks for IUNS references, committees, information and notices. The basic idea is to record and accept the collaboration of the centres, will not be attempting to judge them.

### **International Journal of Nutritional Sciences**

The idea to have an International Journal of Nutritional Sciences has been under discussion at IUNS for several years. There seems to exist a real need for such a publication whose high scientific profile could be maintained by our high level IUNS scientists. Economic support is always a problem and the possibility of an association with an existing publication is being explored. There is no doubt that Nutrition worldwide and the IUNS Adhering Bodies members in particular would profit by the existence of such a publication.

*For further information contact: International Union of Nutritional Sciences, Faculdade de Medicina, 14049 Ribeirao Preto, SP – Brazil and/or Prof J Hautvast, c/o Dept of Human Nutrition, Agricultural University, Bomenweg 2, PO Box 8129, 6700 EV Wageningen, The Netherlands.*

### **The ACC/SCN workshop “Nutrition–Relevant Actions in Developing Countries – Recent Lessons” at the 15th IUNS Congress in Adelaide, September 1993**

At the 14th IUNS Congress in Seoul in 1989, the ACC/SCN Secretariat organized a workshop entitled “Managing Successful Nutrition Programmes” in which case studies of 17 selected nutrition programmes in 12 countries were presented. Following this, at the 1990 ACC/SCN session, it was decided that a series of case studies should be undertaken on country–wide actions aimed at improving nutrition, for presentation and discussion at the 1993 IUNS Congress.

Case studies were undertaken in selected countries, usually by nutrition professionals affiliated with national nutrition institutions, during 1991–92. The ultimate objective of these “Country Reviews” was to explain, as far as possible, the underlying reasons for the nutritional trends observed in each case. The scope necessarily went beyond nutrition programmes *per se*. Clearly, just as malnutrition is multi–causal, many actions have potential for affecting nutrition outcomes, and were thus relevant to the review. An important aim of the Country Reviews was to draw conclusions as to which policies and programmes were effective under given conditions in preventing or alleviating malnutrition, and what were the likely essential factors behind their success. Questions concerning how successful actions are implemented were also to be addressed, along with consideration of who acts – what was the relative involvement of governments, institutions, communities, households and individuals? Such a broad scope required an understanding of the political economy of nutrition, institutional capacity and the inter–relationship between community–level dynamics and programmes.

A workshop entitled “Nutrition–Relevant Actions in Developing Countries – Recent Lessons” has been scheduled for the 15th IUNS Congress in Adelaide, which will take place during the week of Monday 27 September – Friday 1 October 1993. This will draw on material from the Country Reviews, carried out in

India, Zimbabwe, Tanzania, Indonesia, Thailand and Brazil and present the salient findings and recommendations. Additional country studies in Nigeria, Mexico, Pakistan and Egypt were prepared as part of the background work for the Second Report on the World Nutrition Situation, and these too will be discussed.

A satellite 1–2 day meeting has also been scheduled to take place on the weekend preceding the Congress (25–26 September 1993) in order that a more in–depth examination of the case studies might be undertaken. This will allow individual authors to present the main findings of their respective case studies, and serve as a basis for subsequent inter–country comparisons. A synthesis of the case studies is being prepared by the SCN secretariat and this will be available as a background paper for both the satellite and the main workshop.

Individual country reviews for India, Indonesia, Thailand, Tanzania, Zimbabwe, Brazil, Egypt, Mexico, Pakistan and Nigeria are now available with the secretariat and it is hoped will be published in their respective countries in the next few months.

We hope that participants at the 15th IUNS Congress will come to the workshop. You would also be most welcome at the satellite meeting on the same topic on 25–26 September 1993. Please contact the SCN Secretariat if you would like to attend.

## **PROGRAMME NEWS – Progress around the world**

*SCN News publishes reports received on programmes from international organizations concerned with nutrition – please send us information you would like others to know, and we will try to include it.*

DHA (UN Department of Humanitarian Affairs)

### **United Nations International Emergency Network**

In a joint venture with other UN Agencies, Intergovernmental and Non–Governmental Organizations, DHA, Geneva is supervising UNIENET – the United Nations International Emergency Network.

UNIENET is a network of computers linked together electronically which places members of the world–wide disaster management community in direct contact with each other, and provides them instantaneously with both background and operational disaster–related information. Services provided by UNIENET include “electronic mail” – which allows exchange of messages by computer with others having an interest in disaster management – and bulletin boards and databases of disaster–related information. It is possible to send telexes and faxes via the network as well as to access commercial databases.

Electronic–mail is less expensive than an overseas phone call or telex, much faster than the latter, and unlike a telephone conversation, the text of the message is available for later reference.

In order to use UNIENET, either a computer terminal connected to the UN International Computing Centre in Geneva is required, or a personal computer with communications capability: communications software, a modem, a telephone line, and access to “packet switching” – a special high speed telephone connection between computers, available from most telephone companies.

Any organization or individual dealing with disaster management and needing the information or communication facilities provided by the network can apply for access to UNIENET.

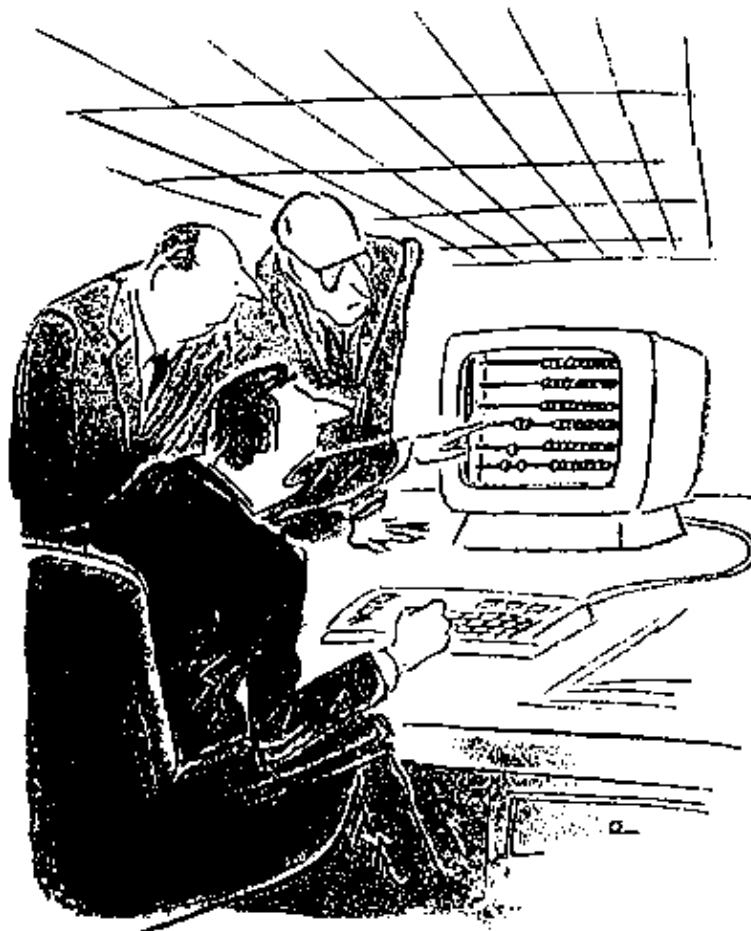
There are two types of charges:

1) Telecommunications. Most telephone companies charge between US\$4 and US\$12 per hour for the connection to UNIENET.

2) Computer access. Basic access (use of Email, bulletin boards, and UNIENET databases) is US\$9 per hour during the day (NY Time) and US\$5 per hour at night, plus US\$0.05 per 1000 characters transmitted. Additional features such as telex and fax transmission, access to commercial databases, and storage of files carry surcharges.

Access charges normally average US\$30–50 per month, but this depends upon individual usage. Certain categories of users, by virtue of their status or location, may be subsidized for part of these fees.

(Source and contact for further information: DHA, Palais des Nations, 1211 Geneva 10, Switzerland. Tel: (41 22) 917 2661 Fax: (41 22) 917 0023)



*“It isn’t just that the software is outdated. Now the beads are stuck.”*

FAO

### **Linking Food, Population and Nutrition Issues in Agricultural and Rural Development**

The rate of population growth has declined in many developing countries during the 1970s and 80s. However, despite the decreases, growth rates in different sectors such as food production, health and education have not been able to catch up with the rate of population growth in many countries of Africa, Asia, Latin America and the Near East. This is reflected, to a large extent, in continuing high rates of malnutrition affecting children under five years of age in many poor countries.

Protein–energy malnutrition is recognised as a multi–causal problem, of which poverty is one of the main contributory factors. In order to solve the problem of malnutrition, different interventions such as poverty alleviation, and economic and agricultural development are necessary. As these are long–term programmes, complementary action is required to address those factors which can bring about change more swiftly, and support the longer term goals. These include, educating people on the advantages of smaller and healthier families, promoting the production of nutritious foods and better eating habits, in addition to adopting sound environmental practices.

A five–year training programme to raise awareness of these issues among professionals and field workers from different sectors such as agriculture and rural development, education, population and health is being carried out by the Food Policy and Nutrition Division of FAO in Africa, Asia, Latin America, and the Near East, with financial assistance from the Government of the Netherlands. The main activity of the programme concerns training on the relationship between food, nutrition, and population.



For this training programme, FAO makes use of training materials on population and nutrition prepared, published and tested with financial assistance from the Government of the Netherlands as part of an earlier project. The training materials are supplements to existing materials, viz: *Field Programme Management: Food and Nutrition*; and *Food, Nutrition and Agriculture*, both of which have been published in different languages. The materials have been designed for use in formal (i.e. diploma and higher level training) and in non-formal (i.e. field worker or certificate level training), pre-service and in-service training courses, respectively.

The training materials on population and nutrition are:

**1. Population and Nutrition.** Version for Africa. (Supplement A to the training pack on *Field Programme Management: Food and Nutrition*). Languages: English, French, Spanish and Arabic.

**2. Population and Nutrition.** Different versions for Asia, Africa, and Latin America. Supplement to *Curriculum Guidelines on Food, Nutrition and Agriculture* and to the teaching pack *Food, Nutrition and Agriculture* (i.e. the textbook, teacher's manual and student's workbook). Languages: English, French, Spanish, and Arabic.

The programme strategy consists of holding sub-regional training workshops in the different regions in order to cover a total of 33 countries where FAO supports food and nutrition training programmes. Training activities began in Africa in 1990 with three inter-country training workshops and in 1991 four workshops were convened for participants from French speaking West and South East Asia. Three further training workshops took place in 1992, two in Latin America and one in the Near East Region.

One of the main objectives of the project is to make population education and nutrition a regular component of training activities in pre- and in-service training of agriculturists, rural development workers and other field staff. It is anticipated that particularly through field worker training on population and nutrition, information on this important issue will be disseminated among rural populations, and thus contribute towards a change in fertility behaviour and improvements in nutrition.

(Source: FAO, 1992)

### **Body Mass Index: Promising Perspectives for its Use**

The nutritional status of a population is reflected in part by the anthropometry of its individuals. Although these data can include variables such as height, weight, skinfold thickness at various points of the body, and arm and head circumferences, data on body height, and weight in particular are easy and inexpensive to collect. When carefully analyzed with other single variables (e.g. demographic, socio-economic, or geographic variables) they can provide substantial information on the nutritional situation of the population. Any biological or nutritional assessment remains incomplete and impoverished by the absence of data on height and weight.

Heights and weights of children, particularly those less than 5 or 6 years of age, and pregnant or lactating women, are accepted measures for monitoring their growth and nutritional status, and are also considered as an indicator of the nutritional status of the entire community. But children, and pregnant and lactating mothers are considered vulnerable groups because they are sensitive to nutritional problems, especially in a poor socio-economic or sanitary environment. When the assessment of the nutritional situation of a population does not include all population groups, and concentrates on only specific groups, there is a major risk of biased conclusions.

Although FAO has been advocating the collection and analysis of adult anthropometry for the past twenty years, this activity only received momentum from the IDECG meeting in Guatemala City from 3–7 August, 1987, on "Chronic Energy Deficiency: Consequences and Related Issues". The subsequent working group convened to determine an operational definition of Chronic Energy Deficiency. Over the past three years FAO has been investigating the functional consequences of Body Mass Index or Quetelet Index ( $BMI = Wt/Ht^2$ ) for assessing the nutritional situation of population. BMI has been extensively adopted as a graduated indicator of obesity and risk of mortality, particularly by life insurance companies. However, little use has been made of the BMI scale as a reflector of the health and nutritional status of a population.

Jointly with the Rowett Research Institute in Aberdeen, Scotland, and a number of institutions in the developing world, FAO has noted a number of interesting consequences associated with low BMI. Results are preliminary and any conclusions must be interpreted with caution, but low adult body weight does have a

negative influence on the capacity to work and is also highly correlated with periods of illness and low physical activity. In addition FAO is pursuing the possible use of the BMI as a simple indicator of nutritional well-being in a community.

A Rowett report to FAO prepared in July 1991 attracted much interest and comments, and an expanded version of this report was scheduled for publication in 1992. IDECG was one of the principal groups attaching importance to this report and, at the February 1992 ACC/SCN meeting in Rome, gave its full endorsement to the continuation of the work. An informal meeting, hosted by FAO in collaboration with WHO, UNU, IDECG and Rowett Research Institute, on the functional consequences of low BMI was held in November 1992.

Among the topics which were addressed were:

- Relationships of BMI and illness
- BMI thresholds for males and females
- BMI and housing/socio-economic conditions
- BMI and seasonably
- BMI and pregnancy
- BMI and staple foods/types of diet
- BMI of mothers vs. nutritional status of under-5 children
- Use of BMI for monitoring impact of socio-economic changes on nutritional status.

(Source: FAO, 1992)

### **Selection of Candidates for Assistance Programmes**

The Food Policy and Nutrition Division of FAO in cooperation with the Institute of Industrial Economy, Federal University of Rio de Janeiro (IEI/UFRJ) hosted in this same city, from 1 to 6 July 1991, a "Meeting of a Working Group to Identify and Select Populations Affected by Structural Adjustment".

High-level officials from Brazil, Colombia, Mexico and Venezuela dealing with this subject in their own countries participated in the meeting and presented related technical documents. The meeting focused on the use of statistical data on social issues and nutritional status for this purpose. A practical demonstration was presented and a qualification form was elaborated to serve as a screening tool for selecting candidates for food assistance programmes.

A joint publication, FAO-IEI/UFRJ, on this subject is available for consultation at the FAO Representation libraries in all Spanish-speaking countries of Latin America and Brazil, as well as IEI in Rio de Janeiro.

(Source and contact for further information: R.J. Dawson, Food Policy and Nutrition Division, FAO, Via delle Terme di Caracalla, 00100 Rome, May 1992.)

### **Vitamin A Programme**

The Vitamin A Programme is FAO's contribution to the "Ten-Year UN Action Programme to Control and Prevent Vitamin A Deficiency, Xerophthalmia and Nutritional Blindness". It depends for its operation on three sources of funds: funds from the Regular Programme of FAO's technical division; funds from the FAO Technical Cooperation Programme; and extra-budgetary resources from UNDP and donors.

The contribution of key technical divisions increased significantly in the years 1991 and 1992 – providing funding to cover the costs of staff time, travel, and consultants' services for project formulation. In the reporting period, the Technical Cooperation Programme has supported two primarily short-term projects aimed at initiating actions in countries, assuring new technology transfer, and supporting technical cooperation between developing countries. Extra-budgetary resources were provided for two projects during the years 1991-1992 (one for an African country; one for an Asian country). Long-term projects have been formulated in addition for 7 countries and 2 regional projects. These projects are the following:

Ghana            Prevention of Vitamin A Deficiency in Upper East and Upper West Regions.

India             Prevention of Vitamin A Deficiency in Backward Rural Areas of West Bengal.

Nepal	Household Gardening for Better Nutrition and Prevention of Vitamin A Deficiency.
Nigeria	Prevention of Vitamin A Deficiency in Kano State.
Tanzania	Nutrition Improvement with Special Reference to Vitamin A Deficiency through Increased Production and Consumption of Appropriate Crops.
Vietnam	Phase II – Nutrition Improvement with Special Reference to Vitamin A Deficiency through Increased Production and Consumption of Appropriate Foods.
Zambia	Improving Household Food Security and Nutrition through Promoting the Production and Consumption of Vitamin A-rich Foods in the Luapula Valley.
Sahel	Transformation et conservation des aliments riches en vitamine A pour améliorer la consommation et la nutrition au niveau villageois.
Eastern Africa	Preservation of Vitamin A – Rich Foods and Nutrition Education. (Kenya, Malawi, Tanzania, Zambia, Zimbabwe).

(Source: FAO Vitamin A Programme Fourth Summary Progress Report 1991–1992 (1992). The report is available in English, Spanish and French from the Food Policy and Nutrition Division, FAO, Via delle Terme di Caracalla, 00100, Rome, Italy)

GTZ

### **Recent Nutrition Activities**

The Deutsche Gesellschaft für Technische Zusammenarbeit or German Technical Cooperation, GTZ, is a wholly-owned executing agency of the Government of the Federal Republic of Germany which has been providing technical assistance to developing countries in the fields of health, population and nutrition for the last twenty years. Commissioned and funded predominantly by the German Government to contribute to the planning and implementation of technical cooperation projects, GTZ is contracted either by the Ministry of Economic Cooperation or by other agencies and governments. One principal objective of its activities, carried out in collaboration with organizations in partner countries, is to strengthen the primary health care systems of these countries by offering a range of advisory services. These services include programme planning, implementation and management, training and qualification of counterpart personnel and the improvement of the infrastructure through building construction and maintenance, and procurement of equipment.

In its approach to the planning, implementation and evaluation of health projects, in cooperation with international and national organizations and institutions such as WHO, the Universities of Heidelberg and Giessen, and others, GTZ is guided by the principle of fostering sustainability and self-responsibility of the national partner organization. The strategic guidelines which are adhered to are: adaptation to the local context; multisectoral commitment; participation of all target groups; self-help orientation; and, decentralization of decision-making.

In 1991, GTZ had many achievements in the area of nutrition. Primary health care projects were encouraged to incorporate nutrition interventions as a component of their activities. These interventions included growth monitoring and promotion, nutrition education, promotion of breast and appropriate child feeding practices as well as dietary intake of micronutrients.

Staff collaborated closely in developing a nutrition policy concept which will be adopted by the German Ministry for Economic Cooperation. This will describe the German Government's strategy with respect to

nutrition in aid projects. Other progress made was the finalisation of a "Handbook for the Appraisal of the Nutritional Situation in a Target Population" and the continuing development of a user-friendly computer programme for data analysis in nutrition surveys. The computer package was field-tested in the summer of 1992.

Nutrition activities in 1992 included the preparation of a concept paper on nutrition programmes for refugees, the preparation of a strategy paper on "Urban Nutrition" which aimed to summarize the experience concerning nutrition in urban and metropolitan areas and, the revision (second draft) of the handbook "Nutrition Interventions".

(Source: GTZ Annual Report 1991: Health, Population and Nutrition. (1992). GTZ, Eschborn, Germany)

### **Training Programme in Community Nutrition in South-East Asia, 1992**

The SEAMEO-TROPMED Centre in Indonesia offers a training programme in Community Nutrition at the University of Indonesia, with special attention given to the management of nutrition programmes. The Centre has been active in the training field of human nutrition since 1970. Recently, the curriculum of the training programme was changed in order to bring it up-to-date with the needs and nutritional problems experienced by communities in South-East Asia. Emphasis is placed on the applicability and adaptability of methods in epidemiology, management and communication to meet local needs and requirements, rather than basic non-applied science. The training programme is assisted by the German Agency of Technical Cooperation, GTZ, the Canadian International Development Agency, CIDA, the International Council for Development, ICD, and North American Universities. The following training programmes are offered: Short Courses (1-3 weeks), Field Study Programme (6 months), Diploma Programme (6 months), Professional Master's Programme (12 months), MSc Programme (2 years) and PhD Programme.

(For further information please contact: The Director, SEAMEO-TROPMED Centre Indonesia, University of Indonesia, 6 Salemba Raya, Jakarta 10430, Indonesia. Tel: 62-21-330205, Fax: 62-21-3106986)

### **Report of the Second Latin American Workshop on Nutrition and Health in Urban Areas**

The 2nd Latin American Workshop on Nutrition and Health in Urban Areas was held 2-6 March 1992 with technical and financial assistance from the German Agency of Technical Cooperation, GTZ, in its planning and implementation. The meeting was under the auspices of the International Institute of Nutritional Sciences and jointly organized by the National Institute of Nutrition "Salavador Zubiran", the Colegio de Mexico and the National Institute of Public Health. The objective of the gathering, which included participants at senior level in governmental, academic and nongovernmental institutions, was to stimulate nutrition projects and programmes and their research and interventions in urban areas. A specific feature of the workshop was the opportunity for participants to discuss and formulate interdisciplinary research proposals and interventions for nutritional problems in urban settings. The proceedings are to be published in Spanish and English in the Archivos Latinamericanos de Nutricion.

(Source and contact: GTZ, Postfach 5180, D-6236, Eschborn. Tel: (0) 6196-790 Fax: (0) 6196-79-7104)

ICCIDD

### **Update on IDD Activities**

The International Council for the Control of Iodine Deficiency Disorders (ICCIDD) has reported excellent progress in activities related to national IDD control programmes in Africa. Since the 1987 WHO/UNICEF/ICCIDD Inter-country Meeting in Yaounde, there has been an increase, from 4 to 26, in countries showing important developments.

As part of a universal salt iodisation master plan which is gradually being implemented, a salt iodisation workshop was held in Botswana in April 1992. Useful discussions were had by the 60 participants from 8 countries including 6 representatives from the salt industry in Botswana, Namibia, Mozambique and South Africa. Consensus was reached on salt iodine levels and follow-up arrangements made in 7 countries. A similar inter-country workshop to discuss West African Countries was planned for Senegal at the end of September 1992.

The 7th International Salt Symposium was convened in Kyoto from 5-9 April, 1992 and included presentations from ICCIDD experts on salt iodisation. A special meeting of 20 salt producer representatives

was held by ICCIDD. A working group has been formed to facilitate the production of iodised salt.

A workshop on "Iodine Deficiency in Europe: A Continuing Concern" was held in Brussels, 24–28 April, 1992, under the joint sponsorship of WHO/UNICEF/ICCIDD/ETA and the European Community. The workshop, which was attended by more than 150 scientists, industry representatives and public health specialists from every European country with the exception of Albania, concluded that there is still inadequate control of IDD in most European countries and consequently, iodine deficiency–related impaired brain development remains a problem of neonates. The meeting called upon governments to initiate adequate legislation, and other necessary measures, to ensure the availability and use of iodised salt, an appropriate method of iodine supplementation. Recommendations on iodine nutrition for mothers and infants in Europe were agreed on and will be promulgated in due course.

An ICCIDD/WHO/UNICEF Symposium on IDD control in the ex–USSR was convened in Tashkent from 18–22 November 1991. It was attended by 98 scientists from 11 of the 12 republics. Although very little data on iodine deficiency in this region is available, the Symposium resolved to initiate appropriate action as soon as possible. Country technical support will be provided by the ICCIDD.

(Source and contact: Dr Basil S Hetzel, Executive Director, ICCIDD, c/o Health Development Foundation, 8th Floor, Samuel Way Building, Adelaide Medical Centre for Women and Children, 72, King William Road, North Adelaide, 5006, Australia)

IFPRI

### **Research Priorities in Food Consumption and Nutrition**

In the context of the overall strategy of the International Food Policy Research Institute (IFPRI), the Food Consumption and Nutrition Division (FCND) of IFPRI, comprising a group of 25 researchers, has recently re–emphasised and narrowed its research priorities. As part of the Consultative Group for International Agricultural Research (CGIAR), FCND is linked to an international network of researchers. FCND research aims to achieve favourable impacts on policies for food security and nutritional improvement. To identify research needs in food policy, FCND interacts on a continual basis with policymakers, IFPRI's clients and partners, and the ultimate beneficiaries – the food insecure and the malnourished poor.

FCND has identified three priority research areas:

- 1. Policies for preventing food and nutrition insecurity arising from seasonality and shocks (famine).** FCND research on seasonality of malnutrition addresses transitory food consumption and nutrition problems. Policies to mitigate adverse consumption, nutrition, and productivity consequences of persistent or erratic fluctuations in food supply and entitlements are studied. Ongoing research on famine in Africa examines the potentials and limitations of market–oriented policies and public interventions for famine relief and prevention.
- 2. Environmental stress, agricultural change, and nutrition: policy implications.** This research aims to generate policy–relevant information relating food security, health, and nutrition welfare to sustainability of natural resources. FCND research on health improvement aims to improve the understanding of the linkages between technology, environment, and resource utilization with consumption, nutrition and health. The nutrition impact on the poor of different types of agricultural technologies such as irrigation is specifically explored. This area builds on past FCND research on the food security and nutritional effects of technological change and commercialization in agriculture. Synthesis of the research on agricultural commercialization, food security and nutrition linkages is nearing completion.
- 3. Factor market interventions (labour and capital) for food security and income–generating activities.** Ongoing research on the food security and nutritional effects of factor market interventions focus on the income earning side of the household food equation with a view to creating sustainable consumption and nutrition improvement. Specifically, labour–intensive public works for food security and provision of credit for consumption stabilization are being studied. Particular attention is paid to gender aspects. The implications of "missing" financial and insurance markets are part of the research agenda that focuses on credit in the context of risks for the poor and support for coping with these risks in order to achieve nutritional improvement.

Besides these priority research areas, FCND is pursuing five related cross-cutting and basic research issues in collaboration with other divisions at IFPRI: (1) monitoring of food security and nutrition; (2) determinants of intra-household allocation of resources and gender effects on nutrition in different sociocultural environments; (3) dietary deficiency and health – a new emphasis in FCND research is assessment of the effects of a range of policies and programmes on both macro- and micro-nutrient consumption; (4) food security and nutrition problems in urban areas; and (5) the process of policy implementation and operational aspects of programmes for nutritional improvement.

The research priorities and cross-cutting issues are addressed by tightly defined research projects that mostly have a regional or country focus. They frequently involve case studies, including data collection in collaboration with national or regional partners. Field-based research is underway in a number of countries. In Pakistan, the research project on “Food policies, food security, and health linkages in Pakistan” is collecting detailed panel data on consumption, nutrition, production, education, and so forth from rural households in poor districts to enable it to conduct detailed modelling of household decision-making. In Central America, a participatory grassroots based research project is underway to examine food security, health, and nutrition linkages among the poor. In Ethiopia, in-depth data collection is taking place to analyse the effects of seasonal food deprivation on agricultural production and household welfare. Fluctuations in intrahousehold time allocation, and changes in bodyweights for adults and growth of children are being examined to acquire a better understanding of which household members are more likely to become vulnerable during periods of food deprivation.

FCND's research priorities emerge from both insights gained from past research at IFPRI and elsewhere and from changing food security and nutrition conditions. The priorities of research collaborators and policymakers in developing countries are a most important input in the priority setting process at FCND.

(To obtain a copy of “The Food Consumption and Nutrition Division at IFPRI: Priorities and Current Research Projects 1992”, contact Rajul Pandya-Lorch, IFPRI, 1200 17th Street NW, Washington, DC 20036-1998, USA. Fax: 202-467-4439. Cable: IFPRI. Tel: 202-862-5600.)

### **Famine Research at IFPRI**

In the aftermath of severe famines in several African countries in the mid-1980's, the Food Consumption and Nutrition Division at IFPRI embarked on a long-term, in depth research project in Sudan and Ethiopia that was prompted by the desire to prevent famines of such magnitude from recurring and to minimise the effects of famines. The objective of this research project is improve the basis for cost-effective policymaking in the fight against famine in Africa. Among the central research questions posed are: What roles do production fluctuations, policy and market failures play in the development and evolution of famine? and, how should food and agricultural policies, programmes, and projects be designed so that the worst consequences of future famines are avoided?

The research approach adopted is to examine famine events at national and household levels. Special attention is paid to how and whether markets functioned during times of crises. Primary household data have been collected in famine-prone areas of Ethiopia and Sudan. Analysis of household level data, together with secondary information from national and international agencies active in famine relief, suggest key findings:

- \* While drought is a primary agent of famine in Africa today, production failures caused by drought, even those lasting several years, do not necessarily result in famine unless other socioeconomic and political conditions are present. Such conditions can include inappropriate macroeconomic policies and excessive state interference in economic activity, lack of rural roads and transportation facilities, armed conflict, weak popular participation and nontransparent political decision-making processes, and poverty.
- \* There is no one universal response to offset the impact of production shortfalls and fluctuations, but there are broad commonalities in the type and sequence of household responses. Knowledge about these responses is critical for effective public policy for famine prevention.
- \* Food insecurity and famine are inseparable from poverty. Political and military conflict and drought contribute to famine mainly where people are very poor in the first place.
- \* Famines do not happen suddenly. They are an accumulation of events and policies that progressively erode the capacity of poor households to deal with short-term shocks to the

local economy.

\* Famines and food insecurity are preventable. The fact that famines continue to be a threat to some countries in the 1990's must be blamed on a failure of policy, that is, a failure to give priority to the conceptualisation, analysis, preparation, and implementation of preventive measures. Promotion of agricultural growth, improvement of rural infrastructure, provision of basic health and sanitation services, and provision of education are among the key elements of a famine prevention and food security improving strategy.

Several reports have been produced and published, and others are in publication. Findings from the Sudan component of the research have been presented at a workshop in January 1991 that was organized jointly with the Sudanese Ministry of Finance and Economic Planning. Another workshop to report on the findings of the research in Ethiopia was scheduled for last summer. The research will also include assessments of famine effects in urban areas, an integrative evaluation of the micro data from both Ethiopia and Sudan, and an evaluation of food policy and food security issues at the national policy level within and between the two countries in the context of the East African region.

Dr Joachim von Braun is the project manager. The field research and country studies are guided by Dr Tesfaye Teklu in Sudan and Dr Patrick Webb in Ethiopia.

(For a copy of *Drought and Famine Relationships in Sudan: Policy Implications* (Research Report 88) by Tesfaye Teklu, Joachim von Braun, and Elsayed Zaki or for a copy of *A Policy Agenda for Famine Prevention in Africa* (Food Policy Report) by Joachim von Braun, contact Rajul Pandya-Lorch, IFPRI, 1200 17th Street NW, Washington, DC 20036-1992, USA. Fax: 202-467-4439. Cable IFPRI. Tel: 202-862-5600.)

UNICEF

### **Child Growth Monitoring**

The UNICEF Nutrition Strategy is based largely on the recognition that households and communities have many strategies for reaching favourable nutritional outcomes while coping with limited resources. A model for the method by which decisions are made on the best actions to take is the "Triple-A Cycle". Individuals, households and communities will first assess the presence and severity of a nutritional problem and analyze the probable causes. Based on the conclusions they reach, action will be taken according to available resources. How the action they take affects the original problem (favourably or unfavourably) allows modification of the analysis of causes and appropriate action – and so the cycle continues.

Growth monitoring has been advocated for more than 20 years by UNICEF, which has used it in many of its own programmes. It can be seen as a method of providing data to aid households and communities in their assessment of a nutritional problem: an assessment is made through weighing the child; an analysis is made through comparing the child's weight with the weight during previous weighing and growth retardation is observed; the child caretaker is counselled about possible causes and suggestions are made about more relevant actions.

There have been successes and failures with the implementation of growth monitoring and promotion (GMP) – and in 1989, several members of the UNICEF Executive Board, taking into account the mixed experiences with GMP, asked for a comprehensive evaluation of experiences to date. In 1990, UNICEF (Evaluation Office and Nutrition Cluster, Programme Division), New York, formed a reference group to guide a process of evaluation of GMP. This process involved evaluations in seven countries (China, Ecuador, Indonesia, Malawi, Thailand, Zambia and Zaire) where UNICEF had been supporting national and local capacities to use GMP.

A technical workshop organised by UNICEF in Nairobi on 7–9 May, 1992, has reviewed the findings and lessons learned from each country's evaluation, and has put together a general set of recommendations for application in UNICEF-supported nutrition programmes. Following this workshop, an international colloquium was held in Nyeri, Kenya (11–13 May, 1992). The purpose of this meeting was to reach an international consensus on how to promote the growth of all children in the future, taking into account the experiences of the 1980s and the views of proponents and opponents of GMP. The "Nyeri Declaration on Growth Promotion for Child Development" (see box) is similar to the recommendations of the UNICEF meeting.

### **Towards an Improved Strategy for Nutritional Surveillance**

In Mid-1991 UNICEF initiated a process to re-conceptualize nutritional surveillance, and, based on the accumulated experience from developing countries, to identify ways to improve the impact of nutritional surveillance on decision-making. This process included an initial meeting with experienced persons from donor agencies, developing countries and universities, visits to seven countries by consultants to learn from successful elements in these countries, and a follow-up workshop to discuss the findings and identify components of a strategy to strengthen nutritional surveillance.

The follow-up workshop took place in New York on 29-30 January, 1992, and focussed primarily on five themes related to implementation of nutritional surveillance and its impact on decision-making. These were:

- A. Strategies to increase awareness and communication of nutrition problems.
- B. Methods of assessing nutrition problems, including indicators of nutritional outcomes and contributing factors
- C. Issues related to the analysis of nutrition problems and solutions
- D. Distinguishing surveillance of nutritional status from surveillance of nutrition problems, the latter implying a broad consideration of contributing factors and solutions
- E. Factors influencing the impact of surveillance on decisions.

Each theme was discussed in detail by a working group and again in a plenary session. The discussions across the five themes suggested that a strategy to improve nutritional surveillance should give attention to at least the following seven components:

1. **Consensus on Concepts and Policies Regarding Nutritional Surveillance:** This includes consensus among UN agencies, within countries and among all parties supporting surveillance (consultants, training centers, etc.)
2. **Accountability and Demand for Nutrition Information:** The ethical aspect of the human development goals for the 1990 has created a new political environment in which governments increasingly will be seen accountable for the achievement of these goals. This will generate an active demand for nutrition information.
3. **Strengthen Institutional Capabilities:** At least seven different types of "analysis" were identified as being relevant to surveillance (including conceptual and empirical, quantitative and qualitative). These have corresponding variations in requirements for skills, training and institutional loci of the analysis. Accordingly, it was recommended that a review of training requirements be undertaken; that the surveillance strategy consider the purpose, scope and configuration of a "central" surveillance unit in a country; and that the strategy consider how such a unit might catalyze and support the "analysis" within individual sectors (i.e. planning sections within ministries) which cannot be undertaken by the central unit itself.
4. **Methodological Development:** Whereas the methodologies for assessing nutritional status are well-advanced, these are much weaker with respect to factors contributing to nutritional status (e.g. child care, household food security and health-related factors). These methodologies should be strengthened, recognizing that indicators of these latter factors may be highly situation-specific.
5. **Exchange of Experience:** There are positive elements of surveillance activities in many countries, and this should be increasingly true as the new strategy is implemented. Information on these positive elements, and on experience in general, should be exchanged across agencies, countries and other parties in order to reinforce the common conceptual framework and accelerate developments in other countries. The UN can play a key role in this exchange.
6. **Broader-Based Approach to Surveillance:** The future surveillance strategy should explicitly promote a focus on priority aspects of the nutrition "problem" rather than nutritional status *per se*. This has far-reaching implications for the design and implementation of surveillance activities in a country, including types of decisions, types of data required, location and type of analysis, and so on.



7. **Re–Consider the Term “Nutritional Surveillance”**: In light of the improved conceptualization of nutritional surveillance it was suggested that this term may no longer accurately reflect the underlying purposes and activities. The term should therefore be re–considered, but proposed alternatives should reflect the seriousness of the endeavor and should not harm the credibility of future efforts.

(Source: UNICEF, New York, 1992)

### **The Nyeri Declaration on Growth Promotion for Child Development**

“The participants at the Colloquium on Growth Promotion for Child Development in Nyeri, Kenya, 11–13 May 1992, recognise that it is morally unacceptable that malnutrition is a major contributing cause in 10 million out of the 15 million deaths of children in the world each year. The World Summit for Children and the International Convention on the Rights of the Child affirmed, as a global ethic, that the protection, development and survival of the child is a human right. Nations should give priority to children in the allocation of resources.

“The Colloquium recognized that growth monitoring is being implemented in many countries for millions of children. Too often, this monitoring has not promoted growth because the weighing and charting has not been followed by action.

“The Colloquium recommends that:

1. Growth promotion for child development should use cyclical problem–solving approaches based on assessment, analysis and action.
2. Physical growth is normally a reflection of child development. Cognitive and psychosocial development also need attention. Causal factors of poor growth and development need to be understood for effective action to be taken within local resource constraints.
3. All levels of society should support families in their responsibility for promoting child growth and development, and should strengthen the capacity and resources of households in providing food security, appropriate care and protection from infection, and other illnesses.
4. Communities have responsibility for identifying and analysing the factors causing poor child growth and development, and mobilizing resources for sustainable action to provide better child care, feeding and health. Communities should be empowered to demand support from governmental and non–governmental agencies. International agencies should facilitate this process.
5. Supportive services should work with communities to ensure that resources reach the most needy children. This requires mechanisms to identify populations and sub–groups where growth faltering is most prevalent, to define major causes of poor growth, and to mobilize resources and actions.
6. National responsibility for growth promotion should include: macroanalysis of factors contributing to growth faltering. Supportive policies and a framework for planning and action at all levels.
7. These objectives will be achieved if appropriate management information systems and applied research are used to build capacity for improved problem–solving and decision–making at all levels.
8. Use of information for growth promotion falls into two general categories:
  - a) **growth promotion** for individual children involves information from, and assessment by, mothers, community volunteers and service personnel using:

- growth monitoring by weighing and charting, to reflect the dynamics of individual growth in the early years of life;
- occasional weighing without the use of growth charts; and
- other methods of assessment including traditional practices and measurements other than weighing.

b) **community-based nutrition surveillance** using periodic assessment of nutritional status, either by anthropometric or other surveys of populations, in order to focus on children in greatest need.

This declaration calls for a concentration on growth promotion, rather than on standard growth monitoring as currently practiced. It suggests that for individual children, growth promotion programmes should, almost always, first include assessment based on information from the mother, the community and the health workers (or volunteers). Secondly, depending on local conditions and availability of resources, the assessment should consist of one of the following:

- (1) Growth monitoring by regular weighing and charting (GMP).
- (2) Occasional weighing without the use of charts, the weight being used for diagnostic or other purposes.
- (3) Other methods of assessment of growth, and of causes of growth faltering, without weighing.

“In each case, the information from these assessments should lead to an analysis of the factors influencing the growth and health of the child, and then, most importantly, to appropriate advice and actions. This would be followed, at intervals, by reassessment, leading to further analysis and actions. Programmes such as this could be clinic- or community-based.”

*Source: UNICEF Evaluation Office & Nutrition Cluster (1992). Evaluation of Growth Monitoring and Promotion Programmes, Nairobi, 7–9 May, 1992: Workshop Report, UNICEF, New York.*

USAID

### **IMPACT – Food Security and Nutrition Monitoring Project**

The Food Security and Nutrition Monitoring Project (IMPACT), funded by the A.I.D.'s Office of Nutrition, provides technical support in food security and nutrition monitoring to A.I.D. field missions and offices, host country institutions and PVOs. IMPACT assists in building local capacity to acquire and use information to improve food security and nutritional status. It helps design systems to measure the nutritional and food consumption impacts of policies, programmes and projects in agriculture, health and other sectors.

With expertise in information systems design and in identifying indicators of impact and performance, IMPACT is a technical resource to:

- develop information systems to assess the impact of one or more development programmes, projects and policies, including food aid programmes;
- aid in the design of projects in agriculture, rural development and other sectors to maximize the positive impacts on food consumption and nutrition;
- design timely and economic nutrition monitoring systems; and
- develop host country capacity to maintain such information systems over time.

Currently, IMPACT is involved in several technical assistance and operations research activities. It generates data and analyses on consumption and nutrition information, and incorporates its findings in the design of monitoring and evaluation systems and training programmes. IMPACT also produces materials geared to the

needs of policy makers and other decision-makers. Ongoing research activities include:

*1. Nutrition/Agriculture Linkages, Kintampo District, Ghana*

This activity is being conducted by the International Food Policy Research Institute (IFPRI) in Ghana, where a combined credit and nutrition programme is being implemented. It tests the hypothesis that credit directed to women in combination with nutrition activities will be more effective in improving nutritional status than either one alone, or no intervention at all. Its objectives include: to evaluate the impact of its agriculture/nutrition linkages; to implement a local level food and nutrition monitoring system in conjunction with an on-going agriculture/nutrition project; and to assess the importance of community participation as part of the implementation of agriculture/nutrition activities.

A protocol has been developed for the IMPACT study of the Kintampo District credit and nutrition programme. Field staff will be recruited and trained and a survey will be designed. The activity will also involve setting up a self-sustaining food and nutrition monitoring system that can be integrated into the local infrastructure.

*2. Integrating Nutrition and Food Security Components in Agricultural Projects, South Nyanza, Kenya*

The main hypothesis of IFPRI's study is that nutrition activities in combination with agricultural policies stressing income generation will have a greater impact on household food security and nutritional status than either approach used alone. Prior studies have indicated that cash crop production, while leading to increased income, did not result in significant improvements in child health or nutritional status. This activity will test the feasibility of integrating nutrition and food security components into a commercial agriculture scheme, and a local level monitoring system will be designed and implemented in conjunction with the district government.

To date, a research protocol has been developed, local staff have been recruited, and field training is underway.

*3. Field Testing of Alternative Indicators in the International Crops Research Institute for Semi-Arid Tropics (ICRISAT) Villages, Andhra Pradesh, Central India*

This activity aims to field-test and document the validity and reliability of alternative indicators of food and nutrition security in Andhra Pradesh, Central India. Together with ICRISAT, IFPRI is testing the hypothesis that relatively simple, "non-traditional" or "alternative" indicators can perform well in locating the food and nutrition insecure.

The activity planned field surveys in lean (March-May) and peak (October-November) seasons in 1992 in six villages. Nutritional and economic data were collected from 50 households per village. A protocol was developed and the survey instruments were field tested. Data analyses will be conducted later in 1993.

*4. Africa Regional DHS Nutrition and Family Health Analytical Initiative*

This activity, conducted by the Demographic and Health Surveys (DHS) Division of the IRD/MACRO International, aims to make the results of DHS findings in Sub-Saharan African countries available to policy makers and planners, and to undertake further analyses of these data. The project comprises of the following activities related to the nutrition status and feeding practices of young children in Sub-Saharan Africa:

- Briefing packets containing summary graphs, updated as new DHS surveys become available.
- National Nutrition reports describing the nutritional status and feeding practices in each country.
- In-depth analyses which may include comparative studies across countries.

- Training materials for host country use including diskettes with graphs and tables.

IMPACT is managed by the International Science and Technology Institute, Inc. (ISTI). The Project team also includes the International Food Policy Research Institute, Tulane University, Virginia Polytechnic Institute and State University. The Community Systems Foundation, the Center to Prevent Childhood Malnutrition, and IRD/MACRO International are collaborating institutions.

The major part of the Project's services are procurable through USAID buy-ins. Missions may request technical assistance or training under IMPACT by preparing P/IOTs, which will prompt the development of detailed proposals and budgets by Project staff.

(For more information please contact Barry Sidman, Project Director, at 1616 North Fort Myer Drive, Suite 1240, Arlington, Virginia, 22209, USA. Phone: 703-841-1595; Fax: 703-841-1597.)

### **The Nutrition of Adolescent Girls Research Program**

The period of adolescence is viewed as a window of opportunity for enhancing the nutritional status of girls in developing countries. Improved nutritional status is expected to help girls to more fully realize social and educational opportunities, as well as manage their home and market responsibilities more effectively. Additionally, interventions during adolescence will better prepare girls for future work and reproductive demands.

Currently, maternal and child health programmes focus on pregnancy, when women experience the greatest health and nutrition risks. Recent experience suggests that preventive efforts before and during pregnancy can substantially reduce these risks. While programmes are successfully addressing the need for more prenatal care, efforts to improve the health and nutritional status of women before they become pregnant are lagging behind. An ideal time to focus on preventive efforts before pregnancy is during girls' adolescent years.

Little information, however, is available to guide the formulation of policies and programmes that improve the nutritional status of adolescent girls. To meet this need, the International Center for Research on Women recently established the Nutrition of Adolescent Girls Research Program, funded through a cooperative agreement with the Office of Nutrition, U.S. Agency for International Development. The Program will provide needed information on factors that have implications for adolescent nutritional status including family structure, girls' educational level, social status, self-perceptions, physical growth, morbidity, food intake, energy expenditure, intrahousehold food distribution, family structure and economic status. Research results will help identify ways in which interventions can reach adolescent girls.

The Program has four components:

- A research grants program that supports nine research projects: four from Latin America and the Caribbean, four from Asia, and one from Africa.
- An ICRW research project, in collaboration with a developing country research team, to investigate psychosocial factors in girls' lives and their nutritional status.
- Technical support to research teams for developing proposals, data collection methods, and analysis procedures, and interpreting results for policy and program formulation.
- Synthesis and dissemination of the research findings through publication of papers, conferences, and other mechanisms.

The Nutrition of Adolescent Girls Research Program will continue through 1993.

### **RD/N To Assist with National Micronutrient Survey in Nigeria**

The Bureau for Research and Development, Office of Nutrition (RD/N) Vitamin A Field Support Project (VITAL) is providing technical and financial assistance to the Federal Ministry of Health (FMOH) to plan and carry out a national prevalence assessment of key micronutrient deficiencies – vitamin A, iron and iodine. The survey field work will take place in March 1993.

This survey represents a critical element of Nigeria's national food and nutrition strategy, in which USAID, World Bank and UNICEF are collaborating. The National Committee on Food and Nutrition (NCFN) has identified micronutrients as a priority component for inclusion in its strategy, but concluded that there was inadequate information about the prevalence of the problems from which to develop a strategy and policies. Consequently, the NCFN assigned responsibility to the FMOH to arrange for a prevalence assessment. At the request of the NCFN and FMOH, USAID agreed to provide the services of VITAL for this purpose.

The survey headquarters will be at the Ibadan University College of Medicine and a number of leading Nigerian health and nutrition experts from around the country will participate. The World Health Organization and UNICEF will also assist with the survey. The USAID-funded survey of 1991 provides an excellent overall information base about the relative prevalence of protein energy malnutrition (PEM) in the country, and this micronutrient assessment will permit accurate targeting of appropriate intervention strategies to combat micronutrient malnutrition.

### **Baseline Survey Completed in Nepal for Monitoring Impact of Home Gardening on Food Consumption and Nutrition Status**

The RD/N Vitamin A Field Support Project (VITAL) recently completed a baseline survey in Nepal in collaboration with CARE/Nepal and the University of Arizona. This survey collected baseline data on nutritional status, dietary patterns, clinical eye signs and food provisioning strategies in two districts of the country in preparation for monitoring the impact of home gardening activities on the consumption of vitamin A rich foods by children six months to six years old. The multidisciplinary study also included a rapid rural appraisal (RRA) focussing on diet and strategies for acquiring food, training in nutrition education, and the development of a nutrition strategy for two CARE projects including food preservation and preparation techniques.

Preliminary findings from the survey indicate that the current drought in western Nepal, described by several farmers as the worst drought in 29 years, has contributed to a major food shortage in the region with a subsequent decline in dietary diversity. Although nutritional status information is still being analyzed, preliminary mid-upper arm circumference (MUAC) results have found between 15–27% of children in western hill villages severely malnourished as determined by MUAC measurements less than 12.5 cm. Farming households with access to irrigated fields appeared to be less affected by the drought conditions. For children living in the Terai, rates of malnutrition were slightly less than those in the west, but nutritional problems were generally observed to increase from north to south.

The RRA component of the survey also collected information on crops grown, types of animals owned, foods purchased and gathered, sources of income for purchasing foods, access to credit, types of food consumed and their seasonality. Systematic collection of these alternative indicators should enable CARE/Nepal to better monitor household food insecurity by monitoring changes in survival strategies of vulnerable households.

### **Vitamin A Deficiency in the South Pacific**

Based on the findings of surveys in Truk Island and the Republic of Kiribati in the South Pacific, the Vitamin A field Support Project (VITAL) was requested by the health, Population and Nutrition Office of the USAID Regional Development Office/South Pacific in Suva to conduct xerophthalmia surveys in Tuvalu, Vanuatu and the Solomon Islands to determine if vitamin A deficiency poses a public health problem in these countries.

Xerophthalmia surveys were planned and conducted by the Ministries of Health of these countries and VITAL to assess the presence and magnitude of existing clinical vitamin A deficiency, and to provide data which could be used for future nutrition planning by the Governments of Tuvalu, Vanuatu and the Solomon Islands.

Children between the ages of six months and six years were examined for eye signs and symptoms of xerophthalmia in areas thought at greatest risk for malnutrition. Families of the children were interviewed to assess health and socioeconomic conditions and an assessment of dietary intake and anthropometric measurement was carried out on a subsample of the children to determine vitamin A food sources and nutritional status.

The survey results indicate that vitamin A deficiency is not a significant public health problem in Tuvalu or Vanuatu. Consumption information indicates that traditional child-feeding practices include frequent consumption of vitamin A-rich foods and appear to protect against vitamin A deficiency among the pre-school population in both countries. However in the Solomon Islands vitamin A deficiency was found to be a

significant public health problem, with 1.52% of the survey population having one or more active clinical signs or symptoms of xerophthalmia, well above the World Health Organization criteria for a public health problem:

Nightblindness (XN)	0.52%
Bilot's spots (XIB)	1.42%
Corneal xerosis (X2)	0.07%
Corneal ulceration/Keratomalacia (X3)	0.00%

Dietary information found that children with clinical signs of xerophthalmia consumed vitamin A-rich foods significantly fewer times per week than normal children did.

Throughout the South Pacific region imported foods (such as rice and tinned meats) which provide inadequate vitamin A have been introduced and have begun to replace traditional island foods in the diet, including a variety of vitamin A-rich food sources. Studies in Truk and Kiribati indicate that high rates of vitamin A deficiency result from these changes in dietary behaviour. To avoid similar deficiency in other South Pacific island nations, recommendations were made for governments to discourage the replacement of traditional vitamin A food sources with imported foods, and to educate health workers and the general population about the importance of traditional foods for child health.

### **Vitamin A Deficiency in Latin America and the Caribbean: An Update**

Heightened attention is being given to vitamin A deficiency in the Latin America region as a result of recent epidemiological studies that have documented the relationship between marginal, or subclinical, vitamin A deficiency and higher mortality and morbidity rates from infectious diseases in children. A number of Latin American countries are currently conducting vitamin A deficiency prevalence assessments to determine the extent of this deficiency problem, clinical and subclinical, throughout or in specific high-risk regions of their countries. All surveys are evaluating serum retinol levels as well as dietary intake of vitamin A-rich foods as measured by the IVACG Simplified Dietary Assessment Guidelines to assess risk of inadequate vitamin A intake. In some cases, the populations are being screened for clinical signs and symptoms of xerophthalmia as well. The United States Agency for International Development (USAID), through its Vitamin A Field Support Project (VITAL) and directly from its country missions is providing technical and financial assistance to the ministries of health and private organizations conducting these surveys.

The Centro Nacional de Investigaciones en Salud Materno Infantil (CENISMI) in the Dominican Republic has recently completed an assessment of vitamin A deficiency in the most economically depressed southwest region of the country – and in Peru, the Instituto de Investigacion Nutricional (IIN) has completed an assessment in regions of Piura and Puno, as well as in the city of Lima.

In both Bolivia and Panama, vitamin A deficiency assessments are being completed by the Nutrition departments of their respective Ministries of Health with VITAL assistance. VITAL is also providing technical assistance to the Ministry of Health in Ecuador to conduct a vitamin A deficiency assessment in the poorest regions of the country.

The overall impact of these vitamin A deficiency prevalence assessments will be to provide more insight into the extent and distribution of the vitamin A deficiency problem in the Latin America region and to assist public and private institutions in these countries to develop strategies and programmes to prevent and treat vitamin A deficiency where populations are at risk of facing this public health problem.

(Source: USAID, June 1992)

WFP

### **Food Aid and Micronutrients**

To manage the problem of the lack of specific micronutrients in local foods, the World Food Programme, WFP, has taken measures to ensure that the food it provides meets micronutrient requirements as well as supplying extra caloric energy. In the distribution of fortified commodities such as iodised salt; vitamin A fortified dried skimmed milk; edible oils and flours; and blended foods fortified with a variety of vitamins and minerals, the institution helps to prevent and alleviate micronutrient deficiencies in many situations.

The protracted feeding situation in refugee camps often gives rise to micronutrient deficiencies. WFP addresses these inadequacies by changing the composition and quantities of commodities and occasionally by fortifying specific food items. A publication "Guidelines for Calculating Food Rations for Refugees", distributed by WFP in November 1991, represents a joint effort by WFP and the United Nations High Commission for Refugees (UNHCR) to provide a framework for planning food distributions, and has the technical input of health and nutrition experts regarding the adequacy and appropriateness of food rations for refugees and displaced persons.

WFP's development activities can also help overcome local micronutrient deficiencies. In landlocked, poverty-stricken Paraguay, where nearly half of all students between 6 and 15 years of age and four out of ten pregnant women suffer from goitre, one of the consequences of iodine deficiency, WFP uses its food aid distribution system to provide LUGOL, an iodine solution which is being given out as an interim measure until iodine-fortified salt becomes more widely available.

In Panama WFP, in association with the Institute for Nutrition in Central America (INCAP), has recently established the technology to fortify biscuits made from WFP commodities with vitamin A, some B vitamins, iron and iodine. INCAP is to undertake studies on the alterations in micronutrient levels that take place under cooking and storage conditions as well as the nutritional impact on children that consumption of these biscuits will have in areas with high prevalence of vitamin A, iron and iodine deficiencies. If it is proven that the fortified biscuit is an effective nutrition intervention, WFP will support its use in other countries with endemic micronutrient deficiencies.

### **Film and Radio Programmes on Food Aid and Nutrition**

The World Food Programme has produced a 9-minute film, "Building Blocks of Life", about food aid and nutrition. Some topics raised: how food-for-work projects can improve household food security; food aid for pregnant women and young children; weaning foods; adding micronutrients; women as managers of household food security and nutrition; meals for schoolchildren; and nutritional status of refugees. The film is available from WFP, free of charge, in English. A Spanish and French version will soon follow.

WFP has also produced a series of radio programmes in English, French and Spanish about food aid and nutrition, available, free of charge.

(Please write to: Karen Watson, Public Information Branch, via Cristoforo Colombo 426, Rome 00145, Italy.)

(Source: Dr J Katona-Apte, Senior Programme Adviser (Human Resources), WFP, May 1992)

THE WORLD BANK

### **Growth Industry**

With some 20 new major nutrition operations now under active preparation or appraisal, nutrition is moving closer to the mainstream of Bank lending. Free-standing Nutrition Projects are being readied for Bangladesh, India, Mexico, Nigeria and Pakistan. Food Security and Nutrition Projects are at the appraisal stage in Madagascar and Mozambique, and one for Burkina Faso has just been approved. Preparation for combined Nutrition and Health Projects is moving along in Argentina, Burkina Faso, Egypt, Guatemala, Guinea, Honduras, Kenya, Peru and Zambia. Also, Child Development and Nutrition Projects are being prepared for Bolivia and the Philippines and a specialized Urban Health and Nutrition Project for the Philippines is ready for appraisal. Nutrition, in addition, is increasingly figuring large in Social Fund Projects (e.g. in Nicaragua) and Social Safety Net Adjustment Projects (India).

### **Special Grant for Micronutrients**

A Special Grant to the tune of a quarter of a million dollars has been approved to support the Bank's efforts in micronutrients. The grant will be matched by other donors, and the programme characterised as a global micronutrient initiative. Countries will be helped to identify their micronutrient problems and strategies and programmes devised to address them.

One country which has launched an all-out attack against micronutrient deficiencies is Morocco which has recently started a series of studies aimed at developing a national micronutrient programme. These studies will examine the technical and financial feasibility and commercial viability of incorporating iron into sugar in Morocco as well as the willingness of the consumer to accept the product. At the same time the Ministry of

Health will check the efficacy of iron supplements for pregnant women and the cost and feasibility of the programme in selected areas.

### **Emergency Food Aid for Africa**

In a major recent departure, the Bank has been financing emergency food imports, mainly through adjustment operations. To stave off malnutrition and possibly starvation due to one of the worst droughts in decades in southern Africa, the Bank has allocated \$310 million for: Zimbabwe (\$150 million), Zambia (\$100 million), Malawi (\$50 million) and Mozambique (\$10 million). Although food is commonly financed in nutrition development operations, financing of food imports for emergency use has not been a regular feature of Bank work.

### **Food Security & Nutrition Project**

The \$12.8 million Burkina Faso Food Security and Nutrition Project includes income-generating micro-projects to be designed and implemented by women's groups from households with insufficient food – a main purpose being to reduce food energy expenditure through labour-saving devices in, for instance, food processing. Other components support the strengthening of an early warning food surveillance system, a locally-made weaning food, operational research and a participatory behavioural change program in which the villagers themselves make up the nutrition education messages.

### **Collaboration with CARE**

The Bank's first collaboration in nutrition with CARE is now underway in Cameroon, where a \$1.5 million nutrition education component is part of the recent food security project. The NGO's staff will implement the project: in addition, CARE/Canada has added \$300,000.

### **Loan to Romania**

The \$400 million structural adjustment loan approved in June for Romania includes, along with phasing out of generalized consumer food subsidies, an expansion of food coupons, a free meals program, and special support for families with qualifying children.

### **Malnutrition in Kyrgyzstan**

Kyrgyzstan's ambassador to the US, Roza Otunbayeva, told World Bank staff last month that malnutrition is a major problem in her country – and getting worse. That country is undertaking reforms more aggressively perhaps than any of the newly independent countries of Central Asia. But, on return from mission there earlier this year, consultant David Sahn (of Cornell University's Food and Nutrition Policy Program) wrote he was "left deeply concerned that the impact of reforms may indeed be devastating for nutrition." A human resources sector and project identification mission, now in the field, is looking into this.

### **Direct Financing – Food Coupons in Honduras**

The provision of \$18.4 million to the Honduras Health and Nutrition Project for the support of food coupons represents an historic occasion for the Bank. The lending institution has previously directly financed food supplements as well as large-scale experimental studies that included food coupons and the supportive services required for them. However, this is the first time that the Bank will be directly providing support for food coupons. The project is an outgrowth of a pilot nutrition programme which targeted food coupons to 177,000 needy children and women in primary schools and health centres and which witnessed a dramatic impact on both the growth in school enrolment and the use of health centres.

(Source: The World Bank, 1992)

## **PUBLICATIONS**



## **“Food Scarcity and Famine: Assessment and Response”**

(1992), Helen Young, Oxfam Practical Health Guide No. 7

*Food Scarcity and Famine* is a manual designed with the goal of helping field workers in situations of famine or food security to make assessments and decisions on interventions in mind. It goes through steps which must be taken in a famine situation, from definition and identification of the problem to distributing food.

The manual is divided into four sections. The first part sets out definitions for food scarcity, famine and malnutrition, as well as some of their common causes. The ways in which malnutrition can be measured are also discussed. Part 2 deals with making assessments and surveys of situations. It indicates which aspects of the situation field officers must find out about, and which methods are available for accessing the necessary information. Selection and training of a fieldwork team is also detailed, as well as analysis of data, and presentation of findings. Part 3 discusses which points must be considered when it comes to deciding on courses of action, and analyses which responses are appropriate in certain situations. Targeting and its appropriateness is also discussed in relative detail. Part 4 deals with food distribution – the different types, e.g. general food rations, supplementary feeding programmes, therapeutic feeding programmes, and the type of problems likely to be encountered.

Contact for further information: OXFAM Publications, 274 Banbury Rd, Oxford, OX2 7DZ, United Kingdom.

## **“1992 Food Aid Review”**

Published by the World Food Programme, 142 pages

This annual review of the food aid policies and programmes of bilateral, multilateral and non-governmental organizations provides a brief overview of the global food aid and food supply situation followed by an analysis of the flows and trends of food in 1991 and a review of the year's major food aid initiatives. In his foreword, James Ingram, the former Executive Director of WFP, talks of the likely increasing need for food aid in the 1990s, against a background of drought and armed conflict in Africa, rapid flux in eastern Europe, as well as the current low grain stocks among major food-exporters.

Ingram concludes with a call for a multilateral arrangement to safeguard world food security, especially for the poorest countries – effectively an assurance by donors of adequate food aid supplies. In recent GATT negotiations, donor readiness to take account of future food aid requirements has been shown, and “this is an area where some creative actions are needed before we are faced with sudden food shortfalls that could spell disaster for millions of people”.

The report is concise and well-illustrated with useful graphics. Following a short introductory review of global food aid policies and programmes in general, WFP's activities during 1991, in development and relief, are considered. A regional breakdown is given in the final three sections which cover Africa, Asia and the Americas respectively. The annexes and statistical tables at the back of the report provide one-paragraph summaries of WFP relief and development operations worldwide, and tabulations of trends of food aid supplies during the 1980s, disaggregated by recipient country, donor and project type.

For further information contact: World Food Programme, Via Cristoforo Colombo, 1-00145 Rome, Italy.

## **“Food and Health: The Experts Agree”**

(1992) Geoffrey Cannon, Consumer's Association, London, 230 pages.

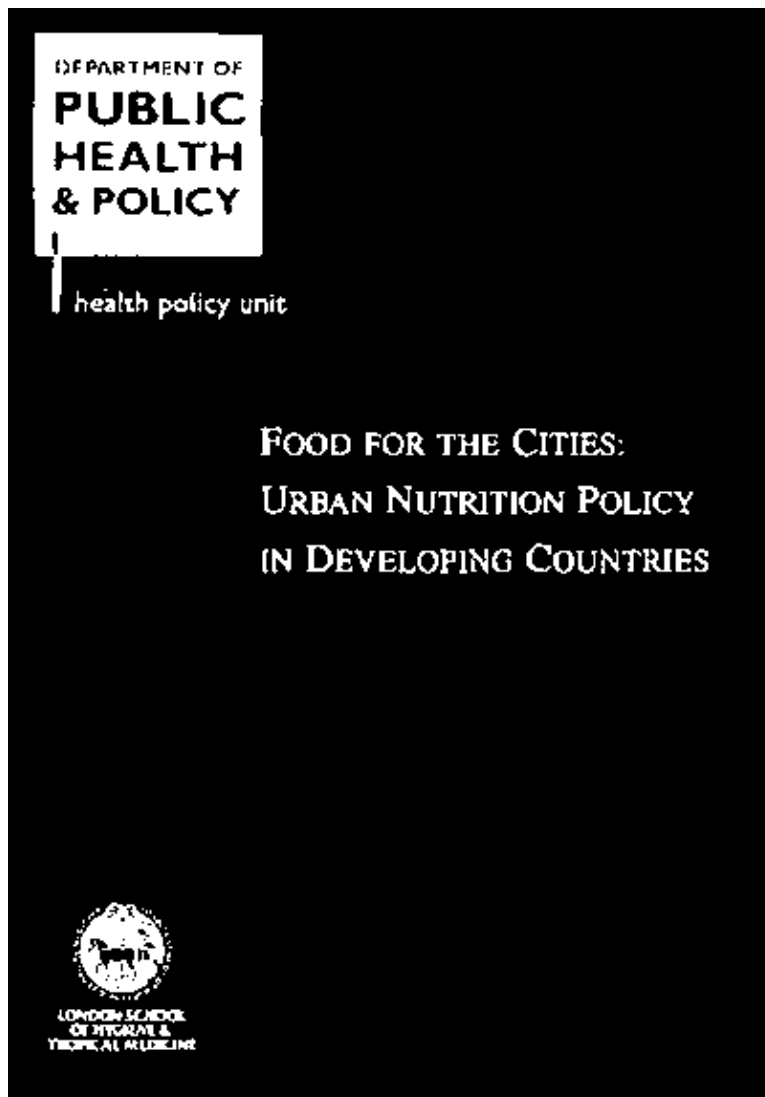
The subtitle of *Food and Health* is “An analysis of one hundred authoritative scientific reports on food, nutrition and public health published throughout the world in thirty years, between 1961 and 1991”. The author claims that such a review is necessary by virtue of the fact that so many people seem to believe that experts disagree on the topic, whereas, according to him, “the great majority of experts worldwide actually do agree”. The report initially traces the history of the British diet, from the age of pastoral society until the present day, before dividing into sections, arranged according to years covered.

Part One traces attitudes towards diet from the early part of the Twentieth Century. As scientific data seemed to indicate more and more that diet could lead to risk of certain diseases, especially heart disease, public policy began to change. Concern about heart disease rose steadily, with reports about diet and coronary heart disease published in many industrialized nations. In the first half of the 1970's, consensus was reached on the relationship between diet and heart disease. It was in this period that campaigns to change attitudes towards diets were first begun.

Part Two (1977–82) sets out what strategies began to be employed to promote health and prevent disease, including discussions about nutrition and health requirements among the experts of the day. Part 3 (1982–86) links Western diets with typically Western diseases, such as cancers, heart disease, obesity etc, and indicates opinions of some Western countries and important health organizations about the relationship between diet and disease, and their recommendations for healthier diets. The subsequent two parts deal with the last five years, and consider the growth of a European consensus on diet, and an emerging worldwide consensus on diet and its relationship to health.

The report can be acquired by writing to The Consumer's Association, 1 Marylebone Road, London NW1 4DF.

### **“Food for the Cities: Urban Nutrition Policy in Developing Countries”**



(1992) by Sarah Atkinson, published by the Department of Public Health and Policy of the London School of Hygiene and Tropical Medicine (LSHTM), 72 pages.

The first question addressed in the review is how far and in what ways the health sector is able to address problems of both malnutrition and food insecurity. It is concluded that the health sector necessarily has limited

scope to address the broad aspects of food security, but can play a significant role in addressing specific issues. The issues which are important in urban areas, and which have received little attention to date, are occupational hazards, the influence of advertisements, the constraints on breast-feeding and how to reach various potentially vulnerable groups such as elderly working adults and street children. The health sector is unable to address wider influences of supply of food and economic access to that supply, beyond a lobbying role.

Issues of food security are obviously a dependent part of overall development policy. The review introduces urbanization within development theory and the planner's perceptions of the urban poor within this context. It is concluded that a fuller picture of urban life is essential if realistic predictions are to be made of the likely impact of any policy on the food security of different urban social and economic groups. Many of studies reviewed here highlight the error of viewing the urban poor as a homogeneous population; they document the variation in economic activities, income, social networks and organizations within communities defined as deprived.

A social factor of particular importance in the urban context is the relationship between individuals and their households. Most approaches to urban food security use the household as the major economic unit. In an urban setting, there is evidence that some individuals do not invest all their resources in the household, but use part of them independently. The extent of involvement of individuals in their households, the allocation of household resources between its individual members and the factors determining such decisions require much further study in order better to understand the relevance of the household unit in urban food security.

Specific programme and policy options for increasing food supply and access to it are discussed. Options requiring more attention and evaluation are urban agriculture, street foods and development of the informal sector. However, it is clear that there are no easy solutions. Most options are simply refinements of old solutions, such as targeting subsidies more efficiently. There is a movement towards supporting survival initiatives of the poor themselves. The crucial question still debated is how far development of informal activities can provide employment, income and food security for the cities. The review concludes that it may be limited as a long-term option.

The review opens with an introduction to the subject matter of nutrition and urban nutrition, leading into a discussion of aspects of urban nutrition that come under the brief of the health sector. Chapters 3 and 4 take a broader definition of urban food security and discuss policy and programme options to increase supply and access. The concluding chapter highlights those issues of urban nutrition that emerged as of particular interest and discusses aspects in need of further attention.

This is number 5 in a series of departmental publications from the health policy unit of LSHTM. Previous publications considered issues of health in slums, the economic aspects of AIDS and HIV infection in the U.K., socio-economic aspects of HIV and AIDS in developing countries, and the balance between public and private health care.

Address for farther details: LSHTM, Keppel Street, London WC1E 7HT, United Kingdom (fax: 071-436-3611).

### **“New York State Nutrition: State of the State”**

(1992) Division of Nutritional Sciences, Cornell University, 176 pages.

*New York State Nutrition: State of the State* synthesizes nutritional data for the entire state into one report for the first time. It uses the most recent data available to provide a complete picture of the nutrition situation of New York residents, breaking down the information by race, income, education, age, sex, and geographic location.

The authors set out the following aims in the beginning of the report: i) To use existing data to describe the nutritional health and needs of New York State residents; ii) To assess whether existing data comprehensively describe the nutritional health and needs of New York State residents; iii) To evaluate whether compiling existing nutritional data into one report is useful.

The report is divided up into several chapters. Chapters 2 and 3 deal with food access and related issues; more specifically, availability and quality of food supply and distribution, and the ability to obtain the food

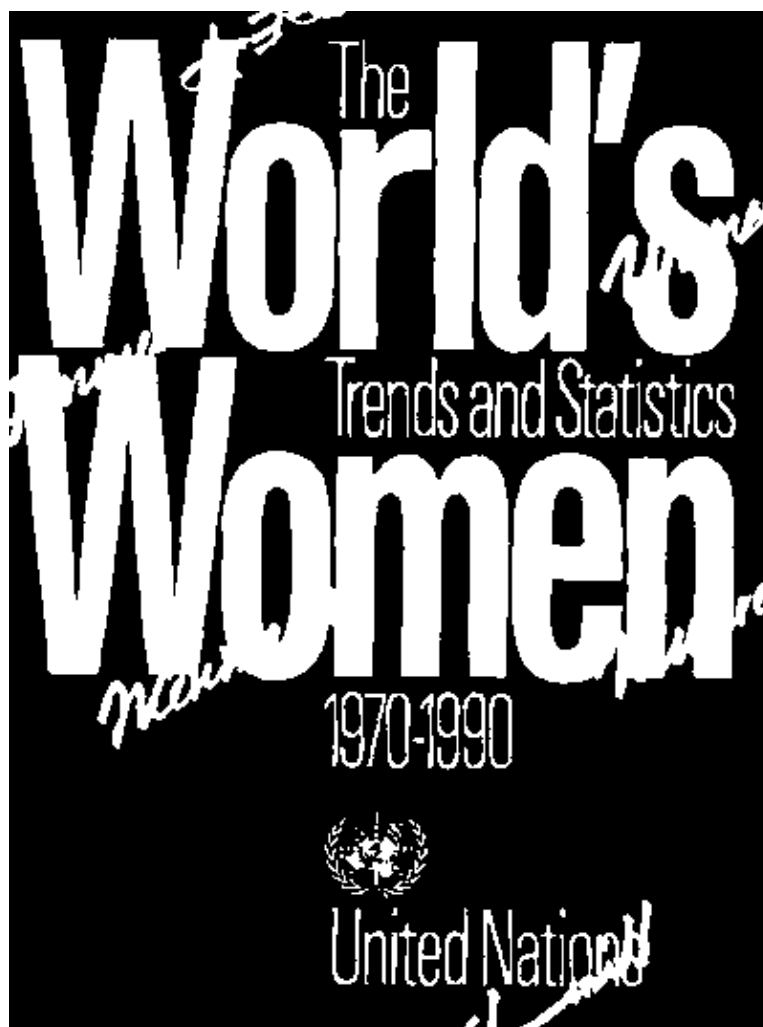
necessary to meet individual needs. It also discusses various food assistance programmes in this context. Chapters 4 through 8 discuss the nutritional health of residents at various points in their lives: pregnancy, infancy and early childhood, school-age children, adulthood and old age. All of the chapters deal with at least four issues: dietary factors, weight status and weight-related practices, nutrition-related health conditions, and access to nutrition information, food and services.

A fair proportion of the report is given to discussing the nutritional implications of government food assistance. This is hardly surprising given the fact that a large number of the poor people in the United States (and therefore those most likely to suffer from nutrition problems) are on some kind of government assistance. The government programmes are also under special scrutiny because of recent cuts in funds for such programmes, at a time when the number of people requiring assistance is increasing. This has particular implications for the nutrition of low-income residents.

A very useful feature in the lay-out of the report are the "New York State Highlights" boxes. These draw attention to the most interesting facts and statistics. The numerous graphs and charts also help to display facts and figures in a meaningful and accessible fashion.

For further information contact: Division of Nutritional Sciences, Cornell University, 104 Savage Hall, Ithaca, NY 14853-6301, USA.

#### **"The World's Women: Trends and Statistics 1970-1990"**



United Nations, New York, 120 pages.

The idea behind producing *The World's Women 1970-1990* is to provide the numbers and analysis needed to understand how conditions are changing or not changing for women – and to do it in a way that will reach women, the media and women's advocates everywhere. In this approach the report is innovative and

experimental for the United Nations. It provides concerned women and men with information they can use to inform people everywhere about how much women contribute to economic life, political life and family life and to support appeals to persuade public and private decision-makers to change policies that are unfair to women.

The direction and the areas covered follow mandates already adopted in the United Nations, including the Convention on the Elimination of All Forms of Discrimination against Women (1979) and the Nairobi Forward-looking Strategies for the Advancement of Women (1985).

The publication is also a statistical sourcebook. Country and area data are assembled on indicators that capture conditions of women and then grouped into regional averages. The regional averages are analyzed and interpreted for presentation in text and charts. A wide range of general and ad hoc statistics have been assembled but many gaps remain – gaps in coverage of important topics, in timeliness, in comparison with men, in comparisons over time and in country coverage. The publication nevertheless provides a guide for accumulating and interpreting more information in coming years. It also provides the most complete presentation so far of how women fare in different parts of the world.

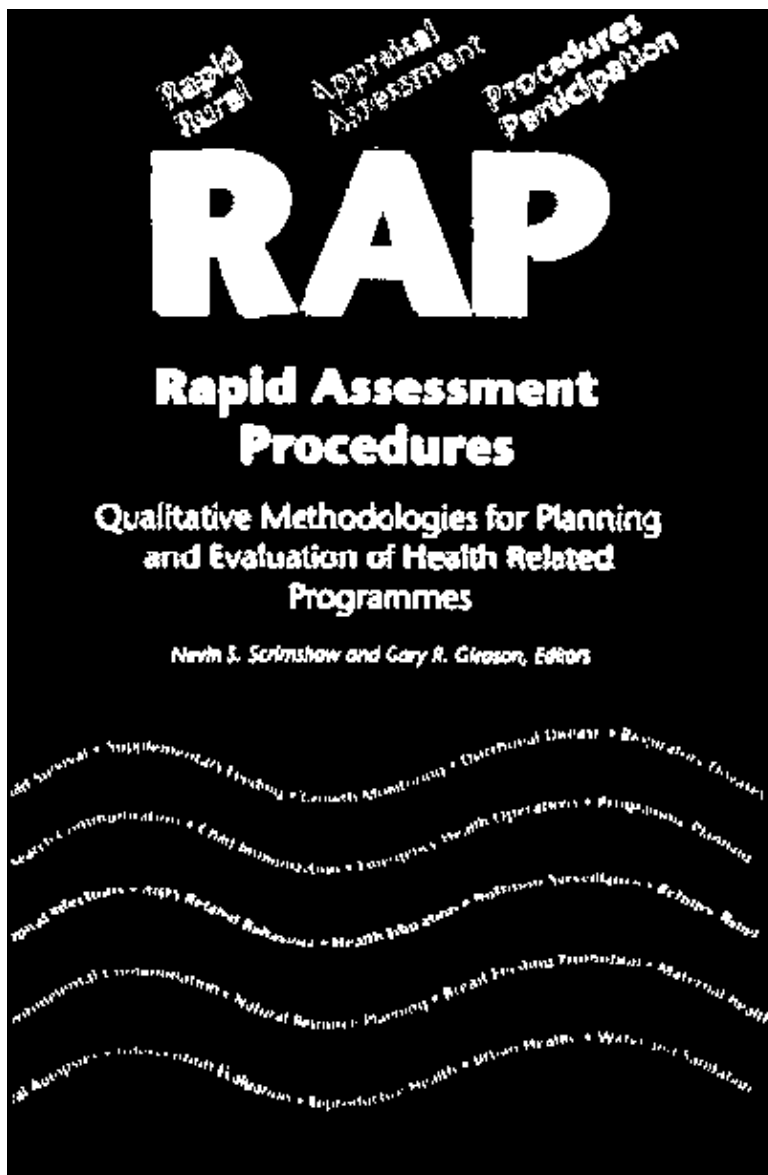
Each chapter begins with its main messages – in four or five sentences – before proceeding with modules of text, charts and sometimes tables to present regional stories drawn from the country table at the back of the chapter. The intention is not to produce a linear narrative, but to assemble, for each indicator, some descriptive text and illustrative charts to convey what is generalizable from the data.

The six main categories of data are the following: i) Women, family and households, with data on population (geographic location), age, marriage patterns, women-headed households, domestic violence; ii) Leadership and decision-making, with information on the position of women in politics, from the grassroots to government, economic decision-making, etc; iii) Education, including literacy, school enrollment, teaching; iv) Health and child-bearing, including life expectancy, causes of death, health of girls, child-bearing, AIDS; v) Housing, including urban/rural differences, environmental issues, water, sanitation; vi) Economic status, labour force participation, agriculture, industry, services, informal sector.

The report is a collaborative effort of the many United Nations bodies concerned with promoting women's equality and participation in development. This effort has been led by the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), the United Nations Development Fund for Women (UNIFEM) and the Division for the Advancement of Women, Centre for Social Development and Humanitarian Affairs of the United Nations Secretariat, all of which also provided substantial financial support.

For further information contact: United Nations Publications, New York, NY 10017, USA.

**“Rapid Assessment Methodologies for Planning and Evaluation of Health Related Programmes”**



(1992) Edited by Nevin Scrimshaw and Gary Gleason, published by the INFDC, 540 pages.

This book presents both conceptual foundations and operational guidelines for rapid assessment methodologies. Edited by Nevin Scrimshaw and Gary Gleason the book draws most of its chapters from presentations, many updated, made at the International Conference on Rapid Assessment Methodologies for Planning and Evaluation of Health Related Programmes held at the Pan American Health Organization headquarters in Washington D.C. in November 1990. The purpose of this book follows that of the conference. It explores the development, use and problems surrounding the wide variety of qualitative methodologies that are currently seeing growing application in the design, evaluation, and improvement of programmes of nutrition and primary health care.

The over 43 chapters on Rapid Assessment Procedures (RAP), Rapid Rural Appraisal (RRA) and related approaches outline research tools that offer strong potential to assist in national and international public health and other areas.

The book is aimed at development practitioners, students of public health, anthropology, sociology, and others seeking to better understand the breadth of RAP and RRA applications. Based on the work of the volume's international array of contributors, readers can gain insight into the core concepts on which RAP and RRA rest as well as a better understanding of the many tools these methodologies use."

Source: RAP News, Autumn 1992. Contact for further information: INFDC, Charles Street Station, PO Box 500, Boston, MA 02114-0500, USA

## **“Ending Hidden Hunger”**

A video on overcoming micronutrient malnutrition. UNICEF/WHO, 1992.

Today, two thousand million people worldwide are at risk from iron deficiency. Eight hundred million people in 37 countries are at risk from vitamin A deficiency; and one thousand million people in 97 countries are at risk from iodine deficiency disorders. Micronutrient malnutrition impairs growth and development (both physical and mental), puts at risk the survival of infants and young children, endangers the physical and intellectual development of school-age children, reduces the work performance and productivity of adults and undermines the reproductive performance of women. In addition, each deficiency has its own specific consequences. Micronutrient deficiencies contribute a brake on socio-economic development, and often are combined in synergistic action to the deprivation of the world's under privileged groups.

The video “Ending Hidden Hunger” illustrates the nature of the problem and how it is being addressed around the world through location shooting in Bangladesh, Ecuador, Tanzania and Zimbabwe. Countries are using combinations of the four main strategies for overcoming micronutrient malnutrition: dietary diversification, food fortification, nutrient supplementation and public health measures. In the long term, the solution lies with a better diet, which will include fortified foods such as iodised salt. While this is being achieved, supplementation can reduce ill health and save lives. At every stage, public health measures can play an important role.

To obtain a copy of the video contact Bedford Productions Ltd, 6th Floor, 6 Vigo Street, London W1X 1AH. United Kingdom. Phone: (0)71 287 9928 Fax: (0)71 287 9870.

## **UNITED NATIONS ADMINISTRATIVE COMMITTEE ON COORDINATION – SUBCOMMITTEE ON NUTRITION (ACC/SCN)**

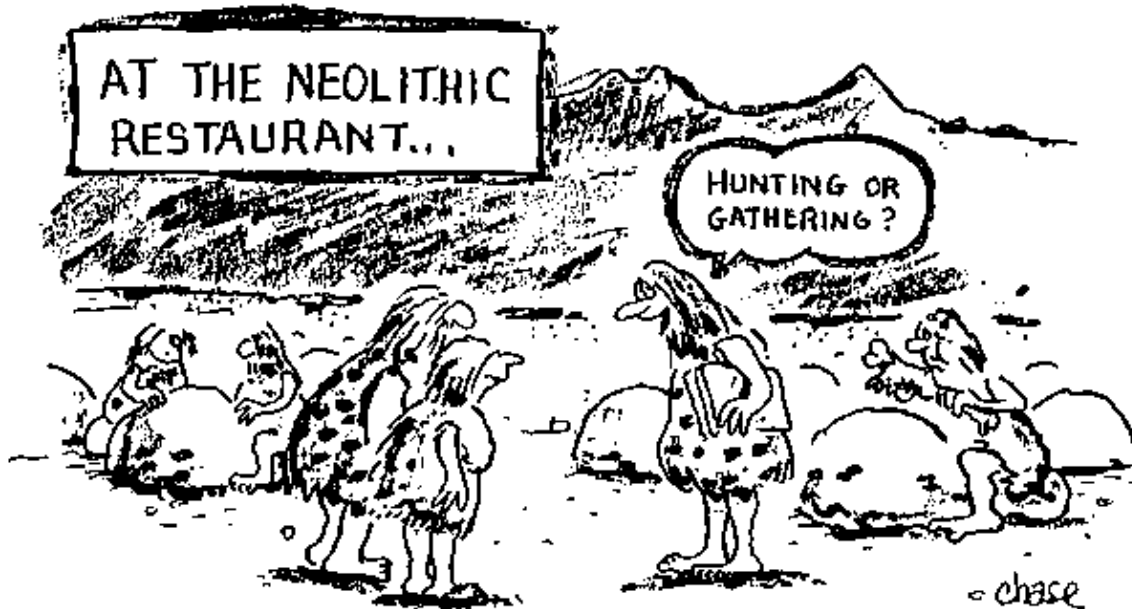
The ACC/SCN is the focal point for harmonizing the policies and activities in nutrition of the United Nations system. The Administrative Committee on Coordination (ACC), which is comprised of the heads of the UN Agencies, recommended the establishment of the Subcommittee on Nutrition in 1977, following the World Food Conference (with particular reference to Resolution V on food and nutrition). This was approved by the Economic and Social Council of the UN (ECOSOC). The role of the SCN is to serve as a coordinating mechanism, for exchange of information and technical guidance, and to act dynamically to help the UN respond to nutritional problems.

The UN members of the SCN are FAO, IAEA, IFAD, ILO, UN, UNDP, UNEP, UNESCO, UNFPA, UNHCR, UNICEF, UNRISD, UNU, WFC, WFP, WHO and the World Bank. From the outset, representatives of bilateral donor agencies have participated actively in SCN activities. The SCN is assisted by the Advisory Group on Nutrition (AGN), with six to eight experienced individuals drawn from relevant disciplines and with wide geographical representation.

The Secretariat is hosted by WHO in Geneva.

The SCN undertakes a range of activities to meet its mandate. Annual meetings have representation from the concerned UN Agencies, from 10 to 20 donor agencies, the AGN, as well as invitees on specific topics; these meetings begin with symposia on subjects of current importance for policy. The SCN brings certain such matters to the attention of the ACC. The SCN sponsors working groups on inter-sectoral and sector-specific topics.

The SCN compiles and disseminates information on nutrition, reflecting the shared views of the agencies concerned. Regular reports on the world nutrition situation are issued, and flows of external resources to address nutrition problems are assessed. State-of-the-Art papers are produced to summarize current knowledge on selected topics. SCN News is normally published twice a year. As decided by the Sub-Committee, initiatives are taken to promote coordinated activities – inter-agency programmes, meetings, publications – aimed at reducing malnutrition, primarily in developing countries.

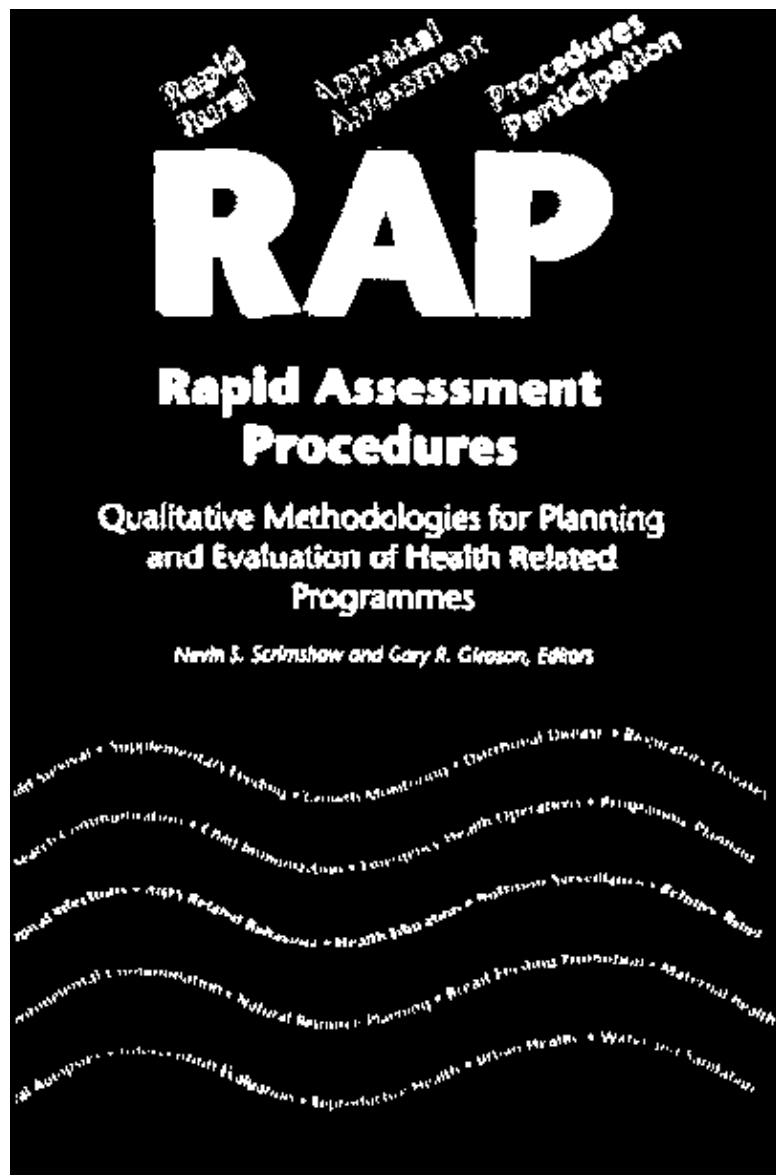


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**Rapid Assessment Methodologies for Planning and Evaluation of Health Related Programmes**

**New Book on Qualitative Research  
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The first comprehensive volume on the use of qualitative methodologies in international health research is now available. The book, *Rapid Assessment Methodologies for Planning and Evaluation of Health Related Programmes*, and has been published by the International Nutrition Foundation for Developing Countries (INFDC) for the United Nations University's Food and Nutrition Programme for Human and Social Development.

Aimed both at development practitioners and students of public health, anthropology, and sociology, the volume's international array of contributors provide insight into the core concepts on which RAP and RRA rest as well as a practical sketch of many of the tools these methodologies use. Edited by Nevin Scrimshaw and Gary Gleason, the book draws most of its 43 chapters from presentations, many updated, made at the International Conference on Rapid Assessment Methodologies for Planning and Evaluation of Health Related Programmes held at the Pan American Health Organization headquarters in Washington, D.C. in November 1990.

Chapters on Rapid Assessment Procedures (RAP), Rapid Rural Appraisal (RRA) and related approaches outline the growing acceptance and use of these methods in national and international public health programmes.

These approaches investigate household and individual health-related behaviors within complex, rational matrixes of personal, organizational, and social realities. They search for opinions and attitudes, behavior, and motivations of both the clients of development programmes and also of those who deliver services.

*The major themes covered in the book are:*

- The Expanding Role of Qualitative Research in International Development
- Development and Applications of Rapid Assessment Procedures in Africa, Asia, and the Americas
- Community Participation and Rapid Rural Appraisal (RRA)
- Institutionalization of RAP
- Training in Qualitative Methodologies
- Decision Making, Communication, and Use of Results

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## First Foods



### NURTURE CENTER TO PREVENT CHILDHOOD MALNUTRITION

**First Foods.** *Breastmilk and complementary foods consumed during the first two years of life.*

The risk of dying from hunger is much greater for children than adults. Each year there are about 49 million deaths throughout the world. Nearly one-third of these deaths occur among children under 5 years of age who die from infection and malnutrition.

Lack of exclusive breastfeeding is a significant cause of infection in early infancy and can result in malnutrition. Breastmilk, the universal First Food, meets all of a child's nutritional needs from birth to about six months of age.

Children are particularly vulnerable to malnutrition during the weaning process, defined as the transition from breastmilk as the sole source of nourishment to the usual family diet.

By six months of age, most babies need other foods in addition to breastmilk. The foods offered to infants are often contaminated and woefully inadequate in calories, protein, and micronutrients. The result: growth faltering and malnutrition.

*If global efforts to reduce malnutrition and mortality are to succeed, they must focus on breastfeeding promotion, enhanced weaning diets, and improved feeding practices.*

#### PROBLEMS DURING WEANING

- Sub-optimal breastfeeding practices
- Poor quality of weaning diets (too few calories, protein, and/or micronutrients)
- Detrimental feeding practices
  - Early or delayed introduction of complementary foods
  - Infrequent feedings
  - Unsupervised feedings
  - Contaminated foods and feeding utensils

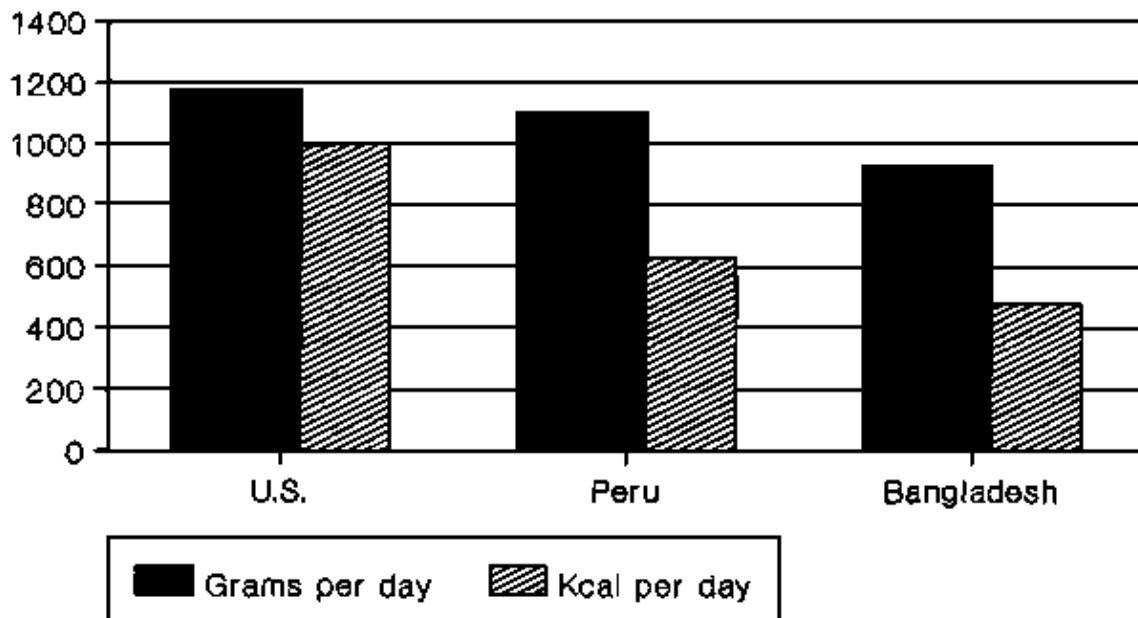
#### Poor weaning diets

While adequate food may be available for adults in poor communities, too often their children are underfed or offered foods with too much bulk or too much water.

Poorly nourished children in many developing countries eat similar *amounts* of food as well nourished children. However, there is a vast difference in food *quality*, as illustrated by the energy (caloric) intake in the figure at the right.

**Too much bulk.**  
**Too little variety.**

In many cultures, the weaning diet consists of a starchy staple. In order to meet daily energy requirements, a toddler weighing 10 kilograms would have to eat 1 kilogram of cooked rice or some other starchy staple. Given their small stomach sizes, young children cannot consume such large quantities of food.



**Amount of Food Consumed and Caloric Intake of Infants in the U.S. Peru and Bangladesh**

Ref: DHHS, 1986; US Ages 6–11 mo.  
 Kanashiro et al, 1990; Peru 7–9.9 mo.  
 Brown et al, 1982; Bangladesh 5–17 mo.

**Too much water.**

Many thin porridges and soups served as First Foods fail to provide sufficient calories. A study in Tanzania found that a child would have to consume 4–5 liters of the traditional liquid gruel to meet the child's daily energy needs!

**Too little protein.  
 Too few micronutrients.**

Weaning diets are often deficient in protein and micronutrients such as vitamin A, iron, and zinc. Absence of micronutrients can diminish a child's appetite and immunity to infection and can result in blindness, stunted growth, mental and physical handicaps, and death.

**Enhancing weaning diets**

- *Inform parents* of the amounts and types of foods appropriate for children
- *Motivate caregivers* to use indigenous ingredients (such as oil and green leafy vegetables) and local processing techniques (roasting, fermentation, and malting) to make traditional weaning foods safer and more nutritious
- *Support community-based projects* to improve the availability of adequate First Foods

**Poor feeding practices**

Malnutrition is more than a food issue; it is also a feeding issue. Various behaviors, traditional beliefs about food, and feeding practices affect childhood nutrition.

**Timing: too early or too late introduction of complementary foods.**

Both early and delayed introduction of semi-solid foods can result in malnutrition. Breastmilk is the complete, perfect food for infants during the first six months, yet breastmilk is frequently replaced in early infancy with contaminated and nutritionally inferior substitutes. If the introduction of complementary foods is delayed beyond six months, breastmilk may not satisfy a child's nutritional requirements.

**Infrequent feedings.**

Given their small stomach sizes, young children need to be fed frequently during the day to ensure adequate food consumption. Labor, time, and resource constraints (lack of fuel, refrigeration, and low-cost processed foods) are often obstacles to frequent feedings.

### Unsupervised feedings.

Numerous studies report a positive correlation between nutritional status and active feeding by the caregiver. Children are more likely to thrive if the caregiver interacts with the child during feeding, sees how much food is consumed, and encourages the child to eat.



### Improving feeding practices

- *Develop social marketing campaigns* to educate parents about good feeding practices
- *Remove obstacles to frequent feeding* by supporting community-based production of weaning food, nutritious snacks for young children, fuel efficient stoves, refrigeration units, and small feeding bowls



Many children cannot compensate for early poor feeding. The two girls in the photo above are the same

age, but the girl on the right is stunted and underweight for her age.

### Diarrhea in weaning-age children



A major cause of diarrheal diseases and associated malnutrition in infants and toddlers is contamination of feeding bottles, breastmilk substitutes, and weaning foods. Weaning food contamination is usually the result of insufficient cooking or inadequate storage and reheating of food.

### Ensuring food safety

- *Promote exclusive breastfeeding* during the first six months and continued breastfeeding during the weaning process
- *Educate caregivers* in safe food preparation, food handling, and personal hygiene
- *Improve water supplies and sanitation facilities*

### FIRST FOODS



Birth to about 6 months	6 months – 24 months
• Only breastmilk	• Breastmilk • Appropriate weaning diet • Improved feeding practices

Photo credits: page 3 Ray Witlin, TALC; page 4 CALMA

**Prepared by Nurture/Center to Prevent Childhood Malnutrition, 3333 K St. NW, Suite 101, Washington, DC 20007 USA; Fax (202) 298-7988**