

Working Paper 27  
March 2000  
Online Version  
November 2002

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# **The Use of Stunting and Wasting as Indicators for Food Insecurity and Poverty**

**PIMU Open Forum**

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## **1 Introduction**

### **1.1 Outline of the Paper**

Poverty alleviation has become a target of many development programmes world-wide. Food security, an important element of poverty alleviation, is a priority focus of German co-operation with developing countries.

Definitions of poverty as well as appropriate indicators to measure the dimensions of poverty have been widely discussed and the concept of food and nutrition security (FNS) has evolved dramatically during the last decades in theory and practice.

This paper will provide some basic information about the current understanding on food security, nutrition security and poverty. A brief overview is given on existing definitions and the evolution of food and nutrition security concerns is described.

The concepts of food security, nutrition security and poverty will be presented, showing that malnutrition arises from various nutritional, biological, social and economic deprivations, and thus implies more than inadequate energy and nutrient intake. Malnutrition is the outcome of various factors in a broad development context.

Nutritional well-being is not only a basic human right, but in addition an important input for development through the creation of human capital with sufficient capacities to provide factors such as labour, finance, education and care. Consequently, nutritional status, as an outcome of all these factors, is highly recommended to be used as an indicator for poverty and sustainable development.

The different indicators for chronic and acute malnutrition of children under five (stunting, wasting, and underweight) as well as adults (BMI) are explained and the advantages and disadvantages for the application, use and interpretation of the various indicators discussed.

A brief overview on the world nutrition situation will be given and a literature review will present the available data on nutritional status in Sri Lanka.

The paper intends to initiate a discussion on the advantages and disadvantages of the various indicators presented, their application for different prospects, their reliability, use for monitoring purposes, practicability etc. and furthermore on the issue whether stunting and/or wasting could be recommended as indicators for poverty.

### **1.2 The Evolution of Food and Nutrition Security Concerns**

The idea of food as a human right might be as old as human history, since food and nutrition security is a primary concern in any society. In 1948 the United Nations incorporated for the first time the freedom from hunger and malnutrition into the Universal Declaration on Human Rights, Art. 25:

In addition, the "International Covenant on Economics, Social and Cultural Rights" (Art. 11) as well as the "Convention of the Rights of the Child" (Article 24) included aspects of food and nutrition security. Amongst those were: adequate food, physical and mental health, medical services, disease treatment, hygiene, sanitation, sustainable environment and care.

Nevertheless, although accepted nation-wide, the right to adequate food and to be free from hunger has not yet been given sufficient attention in the context of operational development concepts.

Global FNS has a more than 50 years history and a sequence of definitions and paradigms. In the **1950s** food insecurity was faced with bilateral food aid only. After the historic Hot Spring Conference of Food and Agriculture in 1943, in which the concept of a “secure, adequate, and suitable supply of food for everyone” was accepted internationally, bilateral agencies of donor countries such as the USA or Canada, which were created in the 1950s, started to dispose of their agricultural surplus commodities overseas.

In the **1960s** it was acknowledged that food aid might be a barrier to development for self-sufficiency. Assistance mainly aimed on economic development, but focussed on food security on a national level, or even with the global goal to reach “world food security” (FAO 1983). The idea was labelled “trickle-down-effect”, thus all members of society should automatically profit from the global economic growth.

The concept of food for development was introduced and institutionalized. The creation of the World Food Program (WFP) in 1963 is one prominent example.

As a result of massive food shortages in the early **1970s**, the so called “World Food Crisis“, marked a dramatic turning point from the past area of food abundance of donor countries to highly unstable food supplies and prices. As a result, food security insurance schemes, which assured international access to physical food supplies, were developed in the 1970s. Improved food security assurance was to be achieved through better coordination between donor organizations and agencies and food availability surveillance in recipient countries. Policies aimed at increasing agricultural production (food availability), but did not face the problem of unequal distribution. National self-sufficiency did not translate into a sufficient food supply on the regional level.

At the first World Food Conference in **1974** in the “*Universal Declaration on the Eradication of Hunger and Malnutrition*“ it was adopted that “Every man, women and child has the inalienable right to be free from hunger and malnutrition...” (cited by FAO 1996, p.26).

Nevertheless, although world-wide per capita food supply for direct human consumption increased, the official number of people suffering from hunger decreased only slightly from 898 million in 1979 to 809 million in 1991.

In the **1980s** it was recognized that food emergencies and even famines were not caused as much by catastrophic shortfalls in food production as by sharp declines in the purchasing power of specific social groups. Therefore, food security was broadened to include both physical and economic access to food supply. The orientation shifted from the global and national level to the household and individual level. In this decade, poverty alleviation and the role of women in development was promoted.

In the **1990s**, detailed plans were defined to eradicate or at least reduce hunger and malnutrition drastically. UNICEF (1990) presented a new development concept, focusing on the individual and household level and including aspects of social services, particularly education and health. The *first International Conference on Nutrition, held in Rome in 1992*, was based on this concept. Nutrition began to be conceptualised in its relation to a broad economic, social and cultural development context, including individual living conditions, well-being and the freedom from hunger and disease (FAO/WHO 1992)

During the preparation of *World Food Summit, which was held in Rome in November 1996*, the human right to adequate food and nutrition was internationally reaffirmed and committed national governments to a more proactive role. Finally, reduced international public support by donor agencies reduced food aid to crisis management and prevention.

## **2 Food Security, Nutrition Security and Poverty**

Just as malnutrition and poverty have over the years been subject of often intense conceptual debate, so by extension has the nature of their relationship. Over time spans poverty contributes to malnutrition and malnutrition contributes to poverty.

In the following, the concepts of food security, nutrition security and poverty will be presented, showing that malnutrition arises from various nutritional, biological, social and economic

deprivations, and thus implies more than inadequate energy and nutrient intake. Malnutrition is the outcome of various factors in a broad development context.

## 2.1 Definitions

### 2.1.1 Food and Nutrition Security

In several documents and at several occasions the difference between food security and nutrition security was discussed.

The definition of food and nutrition security has evolved considerably over time. The starting point of **'food security'** was food availability to balance unequal food distribution regionally and nationally. However, it was rapidly accepted that availability, though a necessary element, is not sufficient for food security, because food may be physically existent but inaccessible for those most in need. Therefore commonly food security is considering the dimensions access and availability of food on global, national, regional or household level.

**Nutrition security** goes beyond the concept of access and availability and includes aspects of use and utilisation of food in quality and quantity as well as intra-household food distribution. Anyway, the term "nutrition security" is hardly found in any documents and therefore rarely used, whereas food security is commonly applied, but not all users imply the same meaning by using this term.

Among the various existing definitions for **food security**, the following definition suggested by the WORLD BANK (1986) is most commonly used and internationally accepted: "access by all people at all times to the food needed for an active and healthy life" (WORLD BANK 1986, p. 1).

This definition is highly generalised through the term "food needed". The FAO/WHO (1992a) came up with a more specific description, which should be added to the above mentioned World Bank definition of food security.

"Food should be sufficient in terms of energy, but also in protein, fat and micronutrients. It should be adequate with regard to quantity, quality, safety and it should be culturally accepted."

At the household level, food security refers to the ability of the household to secure, either from its own production or through purchases, adequate food for meeting the dietary needs of its members. Nevertheless, a household might be food secure, but some household members may still suffer from malnutrition. Consequently, household food security is only a precondition, but not sufficient for an adequate nutritional status of the individual.

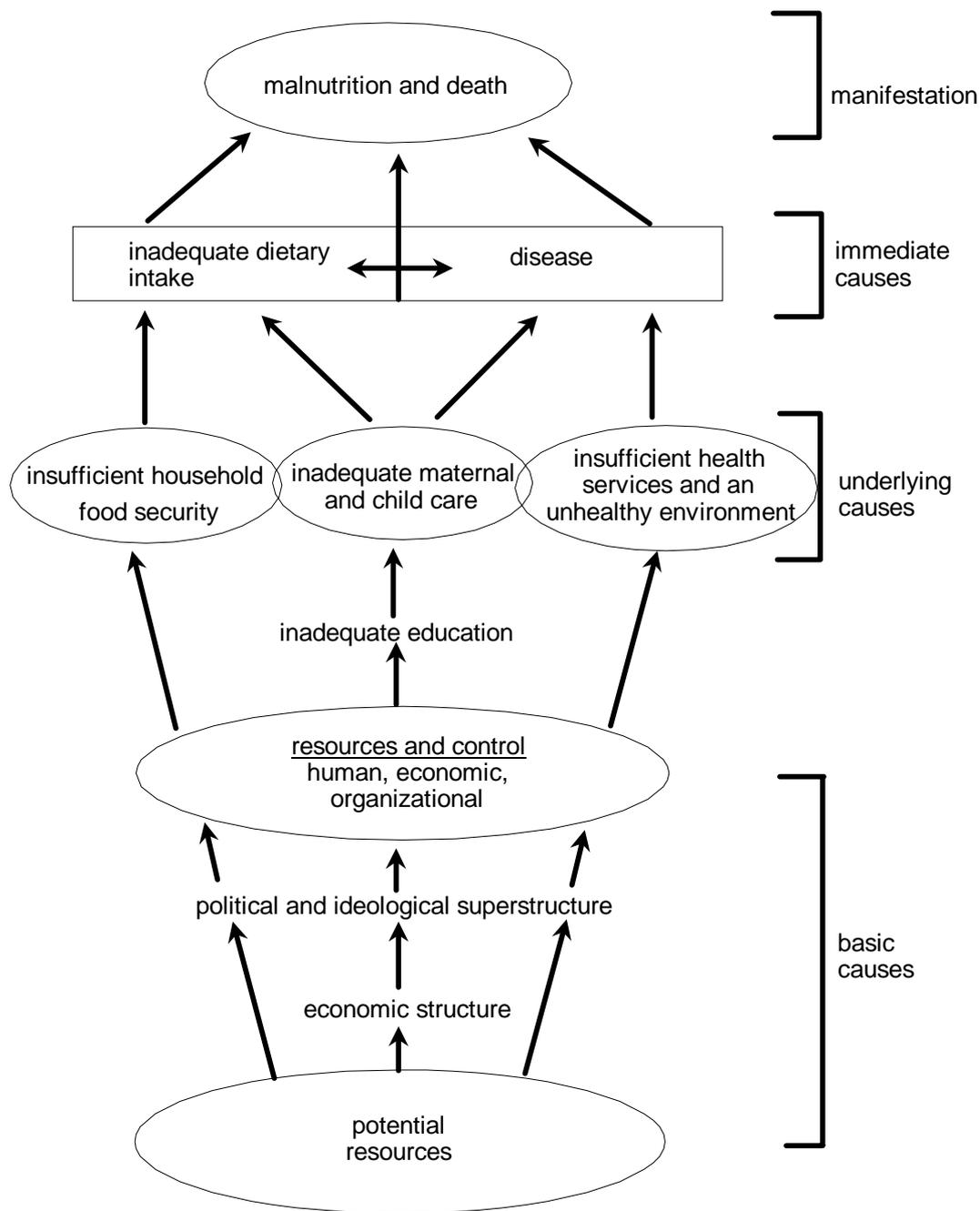
Considering the combination of the World Bank and FAO definition of food security as the most commonly used definition, this goes beyond food availability and access. Aspects such as the use and utilisation of food are also incorporated in this definition, such as diet quality and food safety, provision of health services as well as cultural aspects and intra household food distribution, thus dimensions of nutrition security

It is rather depending on what is meant by food security when applying this term. Various development projects highlight their activities to improve food insecurity, but many of them are limited to aspects of food availability and access (food security in the narrow sense), but do not include any interventions to improve the use and utilisation of food (food security according to above mentioned definition, thus: nutrition security)

Nevertheless, it is suggested not to differentiate between food and nutrition security, but to define food security in a broader sense as presented above, thus as more than purely availability of and access to food.

**UNICEF (1990)** presented a **conceptual framework** for the analysis of food and nutrition security in which malnutrition is considered the outcome of food and nutrition insecurity. Its various determinants are grouped on different causality levels. Consequently, malnutrition is a result of immediate, underlying, and basic causes (UNICEF 1990) (Figure 1).

Figure 1: Multiple causes of malnutrition and death - the concept of food and nutrition security



Source:  
Adopted from UNICEF 1990, p.22.

### Immediate causes of malnutrition:

- Inadequate dietary intake: includes both food availability and access to food. In addition to that it implies the household or individual's desire to obtain the available food and their knowledge of appropriate food preparation, composition and distribution among the household members.
- Disease

### Underlying causes of malnutrition:

- inadequate household food security
- inadequate maternal and child care: provision of time, attention, and support to meet the physical, mental, emotional and social needs. It includes care for the child in general, such as child feeding and protection from infection as well as care for the sick child or other vulnerable household or community members (e.g. elderly, disabled)
- insufficient health services: (immunisation, oral rehydration, growth monitoring, nutrition education and advice on breastfeeding)
- unhealthy environment: drinking water and sanitary facilities.

### Basic causes of malnutrition

- Inadequate education (e.g. through insufficient knowledge to provide adequate care)
- human, economic and organisational resources
- socio-cultural, socio-political and socio-economical factors
- inadequate potential resources in the individual's area of living

Women have multiple roles in the context of food and nutrition security. They are highly responsible for food production, procurement, preservation, storage, preparation, consumption, and food distribution among the family members. In addition to that, they are caretakers of family welfare and are highly involved in collecting fuel and firewood. Therefore, their labour burden is enormous.

Women's nutrition and health status has an important impact on child development, especially during pregnancy and lactation. Reduced energy and nutrient intake during pregnancy is likely to cause growth retardation in the embryo leading to low birth weight and burdening the child with a physical disadvantage that it often cannot compensate later. Large parts of women's income contribute to basic family maintenance, such as child health and but in most societies women are traditionally responsible for food crop production, whereas cash crop cultivation is dominated by men, and in consequence income from cash crop trading is considered theirs.

Women often lack access to health care, education, land, property rights, extension services and credit. A more equal distribution of existing resources and rights between women and men, as well as the provision of adequate education and training, could have great impact on food and nutrition security on the household and individual level. However, attention has to be paid to women's conflicting demands between domestic responsibilities and their own need to maintain health and nutrition security. Further conflicts exist between income-earning activities and care.

### 2.1.2 Poverty

Another widely applied term in the context of development goals and concepts is poverty. According to WORLD BANK 1990, 1.1 billion people live in poverty 70 % of them in Asia, mainly in rural areas where farming is the main occupation.

Successful poverty alleviation strategies cannot be designed, without an appropriate understanding of poverty itself.

In the **1970's** poverty was defined in financial terms only. Accordingly weak purchasing power, or low per capita income was conventionally widely accepted as the main indicator for poverty. As a result of experience and world-wide discussion, the WORLD BANK (**1990**) included social aspects in their definition of poverty, defining it as the inability to achieve a minimum standard of living.

In spite of this, world-wide poverty lines were still defined as monetary poverty lines, leading to a discrepancy between definition of poverty and related indicators for monitoring purposes. The question arises whether poverty can be understood as a deficiency in the standard of living, when only monetary indicators are used to measure its deficit.

As one possible solution to this dilemma, the concept of "basic needs" was suggested. Basic needs include food, health, primary education, favourable environmental conditions, and a social and cultural life, which all are required in sufficient quality and quantity (GROSS, 1997). A broader definition of "human poverty" has been proposed wherein poverty is seen primarily as relating to peoples capabilities and opportunities (UNDP, 1997)

Basic needs are achievable through adequate means, such as finance, time, skills, and social or cultural position (MAXWELL and SMITH 1992).

CHAMBERS (1983; 1991) emphasises in that context the necessity to listen to the poor people's preferences related to their needs, thus include participation in social, political and economic decisions and enable the target group to participate in all phases of development co-operation: planning, monitoring and evaluation.

Efforts to achieve one basic need may limit the access to another, e.g. temporary food security is often in conflict with long-term sustainability. Referring to this conflict, the concept of livelihood security was implemented. Similar to the concept of basic needs, it also considers the aspect that in addition to food, people need shelter, health, care, basic education, employment and an adequate environment, but the food insecure poor have to weigh various livelihood and food security objectives (MAXWELL 1992).

Achieving short-term food security (e.g. through disposing of livestock, tools or land) often leads to increased vulnerability in the future. Since locations inhabited by the food insecure poor are often environmentally vulnerable or degraded, such as erosion-prone hillsides, intensive cultivation often degrades this vulnerable environment. People lack the means to avoid impacts of environmental degradation resulting in decreased productivity of those natural resources. Consequently labour burden of routine household tasks such as clearing the fields, planting, and firewood collection increases. Hence, food insecurity leads to productivity losses in the short and in the long run.

If **poverty** could be defined as:

"individuals or groups are not able to satisfy their basic needs adequately.

The achievement of a minimum standard of living that fulfils these basic needs should be the overall goal in the process of poverty alleviation. Food security (in terms of accessibility and availability) alone is a necessary condition for that, but not sufficient. Nevertheless, in the concept of nutrition security, basic needs are taken into consideration, therefore, the improvement of any single determinant among the concepts of food and nutrition security is simultaneously an important contribution to alleviate poverty.

The conceptual framework of nutrition security published by UNICEF (1990) is already widely accepted, therefore, it could lay the foundation for inter-sectoral communication with the aim of achieving a common understanding of nutrition in its broad economic, social, and cultural development context.

A frequently formulated goal of development programmes is to reach food security, although applied instruments often focus on determinants of availability and access only.

Consequently, the assessment of the impact of these programmes, using indicators which refer to determinants of nutrition security (including use and utilisation of food), frequently leads to unsatisfactory results. It is necessary that development programmes clearly define their goals and levels of intervention, and indicators are applied appropriately to assess impact on food and nutrition security at respective levels of intervention.

### **3 Indicators**

In the discussion on the identification and selection of adequate indicators numerous aspects have to be taken into consideration, such as measurability, sensitivity, reliability, efficiency, and cost-effectiveness. Additional attention requires their ease of interpretation, level of disaggregation, credibility, and political as well as cultural acceptability. The time gap between data assessment and the presentation of results of analysis and recommendations is another important issue. In this context CHAMBERS (1992) presented the principle of “optimal ignorance” (not trying to find out more than is needed) and “appropriate imprecision” (not measuring more accurately than is necessary for practical purposes). Therefore, qualitative data can complete (and under certain circumstances even replace) quantitative data.

The selection of appropriate indicators, according to the aspects mentioned above, depends mainly on the purpose of its use. Consequently the “optimal” set of indicators (if this exists) might be very different for targeting the vulnerable poor, for development planning and policy design, or impact monitoring. Aside from this, it depends highly on the level of assessment, i.e., whether it is global, national, regional, community, household or individual.

#### **3.1 Food and Nutrition Security Indicators**

##### **3.1.1 Overview**

On national or regional level the most common indicator for sufficiency of food supply is kcal/capita/day above the minimum requirement of kcal/capita/day recommended by the FAO (1985). Access to food is commonly described in terms of income, such as annual per capita income. Both indicators do not take into consideration the problem of spatial, political and cultural distance, which often exists between people in need, and the food producers, and lead to unequal distribution between nations, regions, households or even individuals. Within countries with a per capita food supply of 100 % or above, it was common that 20-30 % of the population consumed less than 80 % of the energy requirements (WORLD BANK 1986). Even if food is available on local or regional markets, the poor often lack adequate means or entitlements to secure their access to it.

Considering the multi-causality of malnutrition, it is unlikely that one indicator alone can provide sufficient information. For example, a given level of income is an insufficient indicator for the degree to which persons fulfil their basic needs since it is unlikely that poverty could be alleviated through income alone, where basic needs remain poor.

The tables in Annex 1 and 2 give an overview on possible indicators to describe different dimensions of food and nutrition security.

Given the diverse nature of the determinant factors of human nutritional status, and the different levels of society in which they interact, FNS will necessarily have to involve aspects of both the natural sciences as well as social sciences. As a result, the relevance of FNS at all socio-organizational levels and the interaction between these levels stresses the importance of an interdisciplinary approach of FNS.

Table 1 shows examples of the most commonly used FNS indicators **at different social levels**.

- the individual and the household (micro level)
- the community (sub-district, district and province) representing the meso level
- the nation and the global level (macro level).

<b>Social Level</b>	<b>Availability</b>	<b>Accessibility</b>	<b>Use and Utilization</b>	<b>Stability</b>
Macro	<ul style="list-style-type: none"> <li>▪ Fertility rate</li> <li>▪ Food production</li> <li>▪ Population flows</li> </ul>	<ul style="list-style-type: none"> <li>▪ Food price</li> <li>▪ Wages</li> <li>▪ Per capita food consumption</li> </ul>	<ul style="list-style-type: none"> <li>▪ Stunting rate</li> <li>▪ Wasting rate</li> <li>▪ Low birth weight rate</li> </ul>	<ul style="list-style-type: none"> <li>▪ Food price fluctuation</li> <li>▪ Regional gaps</li> </ul>
Meso	<ul style="list-style-type: none"> <li>▪ Harvest timing</li> <li>▪ Staple food production</li> </ul>	<ul style="list-style-type: none"> <li>▪ Market and retail food prices</li> </ul>	<ul style="list-style-type: none"> <li>▪ Latrine coverage</li> <li>▪ Diarrhoea disease</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pre-/post harvest food</li> <li>▪ Womens BMI</li> </ul>
Micro	<ul style="list-style-type: none"> <li>▪ Food storage</li> <li>▪ Consumption of wild foods</li> </ul>	<ul style="list-style-type: none"> <li>▪ Meal frequency</li> <li>▪ Food frequency</li> <li>▪ employment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Wasting</li> <li>▪ Goiter</li> <li>▪ anaemia</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pre-harvest food practices</li> <li>▪ migration</li> </ul>

National food availability depends on supply and demand. Therefore, data on the production of different food commodities, fertility rate and the trends in internal population should be reviewed to determine the national situation of food availability. Food prices and per capita food consumption are indicators for national food accessibility. The rates of stunting, wasting in children and adults, and low birth weight (LBW) are FNS impact indicators that designate the extent to which food is adequately utilized and converted into an satisfactory national nutrition situation. Fluctuations in food prices and regional gaps of food availability or accessibility are sensitive indicators for national food and nutrition instability.

At the meso level delayed harvest time and reduced staple food production are indications of reduced food availability. Food prices are sensitive indicators for accessibility. Types of sewage disposal and diarrhea diseases (DD) rates provide information on the effectiveness of food utilization. The comparison between pre and post harvest food availability and accessibility as well as wasting (low BMI) of women indicates temporal food and nutrition insecurity.

The lack of food storage and the consumption of wild foods are indicators for reduced food availability of the household. A reduced number of meals per day and increased rate of under or unemployment may indicate low food accessibility. Appearances of wasting, goiter or anemia among household members are outcome indicators of reduced food utilization at micro level. Finally, changes in pre-harvest food consumption practices and migration may be sensitive indicators for temporal food insecurity

### 3.1.2 Indicators on Nutritional Status

Table 2 shows the most common indicators for the **nutritional status** of children < 5 and adults

Table 2: Most common indicators for nutritional status

<b>Children &lt; 5</b>		
stunting	growth retardation	poverty, low socio-economic level, chronic diseases
wasting crisis,	weight-for-height	hunger, insufficient food intake, food shortages
underweight and	weight-for-age	no differentiation between chronic acute
MUAC	mid upper arm circumference	hunger, food crisis, emergency
low birth weight night blindness		because of malnutrition of mother Vitamin A deficiency
<b>Adults</b>		
BMI	body mass index	low food intake, hunger
TGR	total goiter rate	Iodine deficiency
<b>Women and children</b>		
Anaemia		Iron deficiency

Anthropometric Indicators (stunting, wasting, underweight, MUAC, BMI)

- stunting = height-for-age Z-scores below -2 SD of reference population  
Indicator for long-term nutritional deprivation.
- wasting = weight-for-height Z-scores below -2 SD of reference population  
Indicator for acute malnutrition.
- underweight = weight-for-age Z-scores below -2 SD of reference population  
Commonly used for national and regional statistics.

The weight and height measurements of the children is usually quoted in terms of Z-score, based on the standard deviations (SDs) above or below the median reference value for a person of a given age (FAO/WHO 1992). Z-score using the US National Centre for Health Statistics (NCHS). The level of median minus 2 SD is usually taken as the cut-off point or threshold, below which malnutrition exists (FAO/WHO 1992).

Another common classification is the deviation from the median. Commonly children below 70% of the median are classified as malnourished, below 60% as severely malnourished.

- The Body-Mass-Index (BMI) is a measure for fatness/thinness in adults.

$$\text{BMI} = \frac{\text{Weight in kg}}{(\text{Height in metres})^2}$$

Normally body weight is proportional to body height and the BMI of well nourished adult ranges from 18.5 to 25. A BMI higher than 25 indicates obesity and a BMI lower than 18.5 is considered to be an indicator of energy deficiency. Women are considered severely malnourished if the BMI is lower than 17.

- MUAC (low mid upper arm circumference ) describes a substantial weight loss in children, usually due to acute starvation and/or severe disease. Due to the simpler and faster assessment procedure than for wasting, this indicator is useful marker for under nutrition in emergency situations.
- Low birth weight (LBW) indicates that the pregnant woman is severely malnourished (quantity and quality of food) and/or in poor health and predicts future undernutrition for the child.
- Vitamin A, iron and iodine deficiencies are the most common and most severe micronutrient deficiencies in developing countries. Vitamin A deficiency (VAD) causes night blindness, a simple functional indicator for this condition. Iron deficiency induces anemia, which can be measured by the hemoglobin concentration in blood. The most visible form of iodine deficiency is goiter. The total goiter rate (TRG) is an indicator of the duration and severity of iodine deficiency. However, a more accurate indicator of iodine deficiency in the community is the measurement of urinary iodine excretion (UIE) in schoolchildren.

### 3.2 Poverty Indicators

- Poverty has conventionally been measured as the number of proportion of people in a population who earn less than the required standard for minimum subsistence, however the latter is defined. Poverty as such thus implicitly an economic concept with income considered as the main determinant of the persons well being. *Income poverty* may be absolute with respect to subsistence poverty and relative with respect to what others learn or own.
- Human poverty has been proposed by UNDP (1997) in relation to people's capabilities and opportunities. Without opportunity people can not develop their capabilities, e.g. a child without accessibility to health services may have little opportunity to be immunised and thus to develop the capability to be healthy.
- UNDP (1996) recommended the use of CPM (Capability Poverty Measure) to reflect a lack of basic capabilities:
  - Prevalence of underweight
  - Proportion of unattended birth deliveries
  - Female illiteracy
- The better known HDI (Human Development Index) focuses on the average level of capacities, not the lack of capacities.
- The HPI (Human Poverty Index) is a composition of five indices (UNDP, 1997):
  - Life expectancy
  - Literacy
  - Access to safe water
  - Access to health services
  - Child nutrition
- The HDM (Human Deprivation Measure) is also a composite of deprivations in
  - Health
  - Education
  - Income
- Self-perception of the poor is a very important aspect, therefore poverty can also be related to disempowerment in mainly three dimensions: social, political and psychological (Friedmann, 1996)
- If poverty relates to lack of capabilities, women often suffer most. The GEM (Gender Empowerment Measure) measures female participation in political, economic and social spheres of life and their decision making power. (UNDP, 1996)

- Anthropometric indices in growing children have been recommended repeatedly as a suitable key indicator for absolute poverty in communities. Firstly it is generally accepted, that women and children are the most vulnerable groups in communities, compared to the rest of the population. Secondly in numerous studies it has been consistently observed, that anthropometric indicators of growing children who are repeatedly ill do not reflect the attainment of their genetic potential.

Consequently, nutritional status, as an outcome of inadequate food availability, caring capacity, basic education, health systems housing and environment conditions as underlying causes of inadequate food intake and repeated episodes of diseases, is suggested as an alternative indicator for the existence of absolute poverty .

Especially low-height for age amongst children < 5 years of age (stunting) is an appropriate indicator for poverty in a population, since it reflects the dissatisfaction of basic needs during the first years of life.

#### 4 Poverty Situation in South Asia/Sri Lanka

Table 3 shows that according to the applied indicator the percentage of the population classified as poor varies a lot. The percentage of Sri Lankans found to be suffering from Human Deprivation (health, education and income) is with 31% far higher than those who only experience income deprivation (22%).

**Table 3: Human Deprivation in South Asia**  
(Haq 1997, modified by the author)

Country	Population (Mil.)	Health <sup>1</sup> %	Education <sup>2</sup> %	Income <sup>3</sup> %	Human <sup>4</sup> %	Stunting <sup>5</sup> %
Bangladesh	115	31	73	48	61	55
India	902	32	53	25	40	52
Pakistan	133	58	65	34	57	-
Sri Lanka	18	44	27	22	31	18
South Asia	1168	35	56	28	44	52

1 lack of access to safe drinking water and prevalence of underweight <5 children

2 adult illiteracy and out-of school children

3 World Bank 1995, based on national poverty lines

4 deprivations in health education and income (HDM)

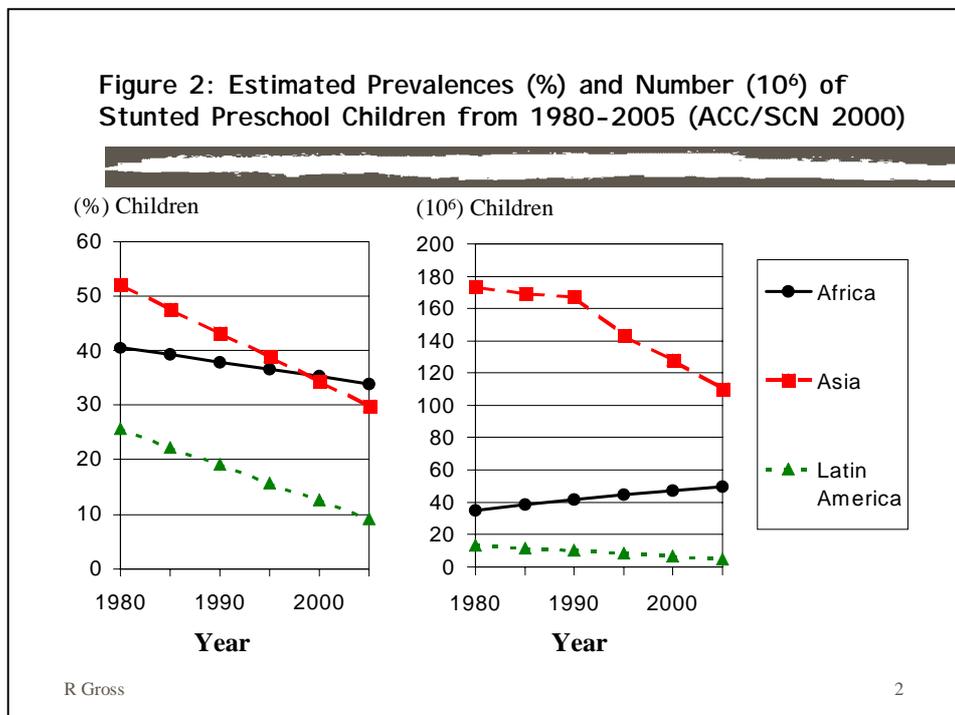
5 prevalence of low height-for-age, Situation of Worlds Children 2000, UNICEF  
(referring to most recent data between 1990-98)

#### 5 World Nutrition and Poverty Situation

According to World Bank presently 1,3 Mio. People live in absolute poverty and 800 Mio. people are malnourished and suffer from hunger. Inequality is worsening. Whereas in 1960 the poorest 20% had 2.3% of the world's income, in 1997 this reduced to 1.1%.

Figure 2 shows the trend in terms of prevalence of malnutrition and the absolute number of undernourished pre-school children in the developing countries of Africa, Asia, and Latin America. By the year 2000 it is estimated that about one third of the children under five years of age in developing countries will suffer from growth retardation (stunting) due to inadequate feeding and

poor health. Although prevalence rates in all three regions are decreasing, the absolute number of stunted children is growing in Africa because of the high rate of population growth. However, within these regions there are considerable differences. For example, in Eastern Africa the percentage of stunting is increasing. Furthermore, despite improvements in Latin America, the total number of stunted children has remained constant in Central America in the period of 1980-1990.



Inadequate food and poor health are two direct factors contributing to undernutrition. Major achievements have been reached that most of the people in the world receive sufficient food to meet their energy requirements. However, energy is not sufficient to ensure good nutrition. Adequate micronutrients must also be available.

Among the most important micronutrients are: iron, vitamin A, and iodine. Indisputably, iron deficiency is a major public health nutrition problem. According to the estimation of WHO, about 5 billion people suffer currently from iron deficiency - about 80% of the world's population. In a recent evaluation (1999), a MI/UNICEF/Tulane University research team concluded that nearly two third of 78 studied countries have VAD of public health importance. In a joint effort WHO, UNICEF and ICCIDD recently updated the statistics on iodine deficiency diseases (IDD). Out of 191 countries that were classified, 130 had IDD as a public health problem. In 1999, about one third of the world's population is at risk for IDD.

Undernutrition has severe consequences in the economic and social development of people and countries. According to the ACC/SCN, at least 50% of diseases are caused by malnutrition and the economic growth of the world economy is reduced by more than one percent due to malnutrition.

## **6 Use of Stunting, Wasting and Underweight in available Data on Sri Lanka**

presented by Mr. K.B.S. Wijeratne, Sewa Lanka Foundation, Colombo

## **7 Points for Discussion**

- Is it necessary to differentiate between food and nutrition security?
- Basic needs concept acceptable as definition of poverty?
- Should poverty indicators describe exclusively long-term or also short term deprivations of basic needs?
- Why monetary indicators to measure poverty are still predominant?
- How far are poverty indicators considered for development policy and development programs (formulation, implementation and evaluation)?
- Advantages and disadvantages in the application of stunting as poverty indicator (measurability, reliability, cost-effectiveness)

## **8 Synthesis**

Poverty is multi-dimensional. Poverty exists, where basic needs are not fulfilled, where there is little power, little choice and where there are serious deficiencies in the amount and control of resources. Poverty is not static, it is constantly generated by structures and processes in society.

We should talk about “human poverty as poverty means poor people. Poor people should be recognised as key actors in development – subjects, not objects-and outsiders thus need to learn to listen more, and to play a catalytic role.

Development programmes often define poverty alleviation and the satisfaction of basic needs as their overall goals, whereas activities often only focus on improved access or availability of food in a certain region - only one dimension of food security. The availability of food on household and individual level, as well as the economical and physical access of households and individuals are often neglected.

Poverty affects nutrition. The relationship is best understood when poverty is defined in a broader sense, in relation to human capabilities.

Nutrition affects poverty. Malnutrition has damaging physical and mental consequences for individuals, households and communities. It reduces a person's productivity and a child's cognitive development. Ultimately malnutrition hinders the economic and human development of a nation.

Poverty is more than a lack of income and assets. While income poverty is important for nutrition, it is not necessarily strongly related. For human beings to fulfil the many aspects of their potential (physical, mental, social, economic, etc.) they require basic needs, to which they have their rights.

Nutrition is more than food. Health, care and a healthy environment are equally necessary conditions for good nutrition. Food is not merely an aggregation of calories – micronutrients are important components which need more attention.

Present policy is often neglecting the need of a multi-sectoral approach as well as community involvement in all phases of development co-operation: planning, implementation and monitoring of programmes. This needs to be improved urgently to tackle the problem of food and nutrition insecurity, thus to overcome malnutrition and poverty and to meet the population's basic needs.

## REFERENCES

- CHAMBERS, R.  
PRA methods for quantifying and ranking. IDS, Sussex 1991
- CHAMBERS, R.  
Rural appraisal - rapid, relaxed and participatory. IDS Discussion Paper, No. 311, Sussex 1992
- FAO  
Approaches to world food security - selected working papers of the Commodities and Trade Division. FAO Economic and Social Development Paper, No. 2, Rome 1983
- FAO  
Food security assessment - technical paper prepared for the World Food Summit. Provisional Version, Rome 1996
- FAO/WHO  
International Conference on Nutrition - world declaration and plan of action for nutrition. Rome 1992
- FRIEDMANN, J.;  
Rethinking Poverty: Empowerment and Citizens Rights. International social Sciences Journal, 161-172
- GROSS, R.;  
Nutrition and the alleviation of absolute poverty in communities: concept and measurement. In: Nutrition and Poverty, Papers from ACC/SCN 24<sup>th</sup> Session Symposium Kathmandu, March 1997
- HAQ, M.;  
Human Development in South Asia 1997. Oxford University Press, Pakistan
- MAXWELL, S.  
Food security in Africa - priorities for reducing hunger. In: Africa Recovery Briefing Paper, No. 6, 1992, pp. 1-12
- MAXWELL, S., SMITH, M.  
Household food security - a conceptual review. In: MAXWELL, S., FRANKENBERGER, T. R.: Household food security - concepts, indicators, measurements - a technical review. UNICEF/IFAD, New York, Rome 1992
- UNDP  
Human development report 1996. Oxford University Press, New York
- UNDP  
Human development report 1997. Oxford University Press, New York
- UNICEF  
Strategy for improved nutrition of children and women in developing countries - an UNICEF policy review, New York 1990
- WORLD BANK  
Poverty and hunger - issues and options for food security in developing countries. World Bank, Washington, D. C., 1986
- WORLD BANK  
World Development Report 1990 - poverty. Washington, D. C., 1990