

**National Consultation
on Developing Socio-medical Tools for Early
Identification of Acute Hunger and Starvation
for Effective Administrative Action**

**JNU
13th May, 2010**

**CSMCH-JNU,
SADED-CSDS, CES
Office of Commissioner to the Supreme Court**

Public Health Approach to Early Detection of Acute Hunger : the Challenges & Possibilities

Ritu Priya
(with Lakshmi Kutty, Kumaran, Dilip,)
CSMCH , JNU

The Challenge

**Children 0-6 yrs. --50% moderate and
severe malnutrition
--90% mild, mod., severe**

Adults -- 40% chronically energy deficient

**Households-- 40% deficient in calorie &
protein intake**

Fig.12 Distribution (%) of children (1-5 Years) according to Gomez classification and Sex

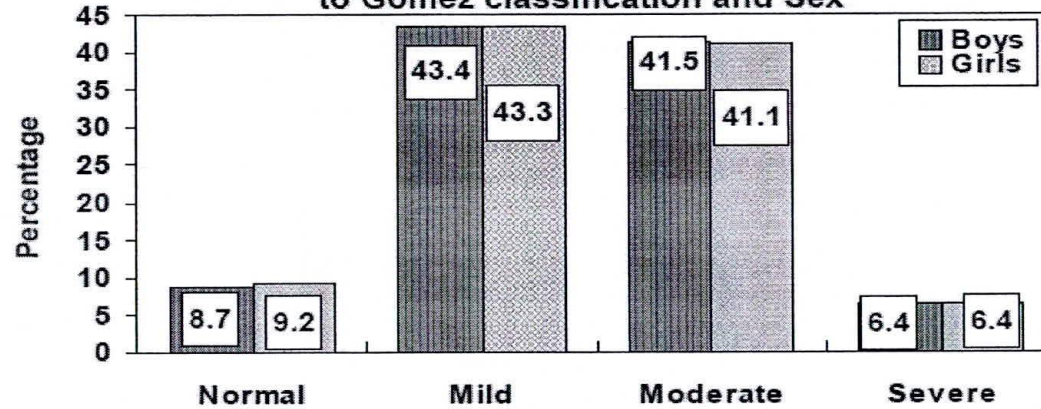
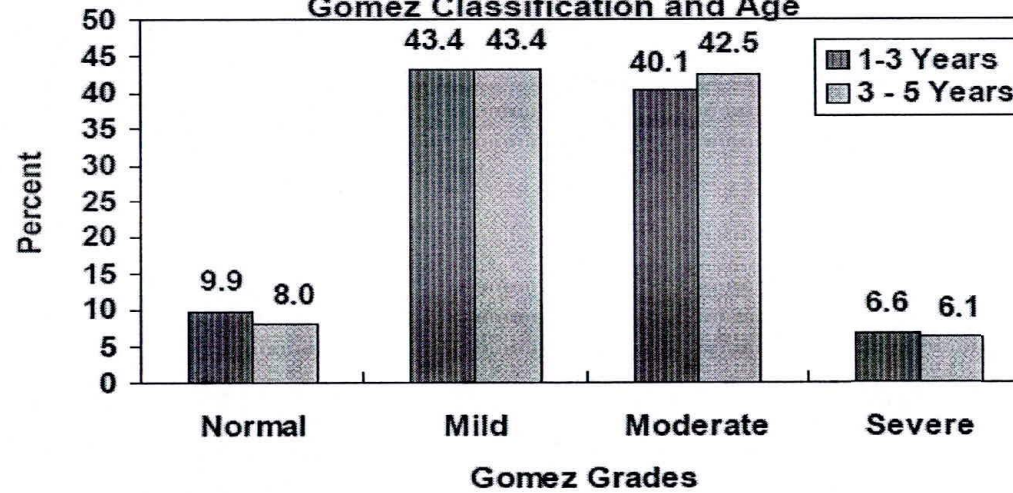


Fig.13 Distribution of Children (1-5 Years) according to Gomez Classification and Age



India:

65% child deaths have mild-mod-severe malnutrition as underlying cause

15% child deaths have severe malnutrition as underlying cause

[Source: Palletier, D. L., E. A. Frongillo, D. G. Schroeder, and J. P. Habicht. 1995. The effects of malnutrition on child mortality in developing countries. Bulletin of the World Health Organization 73 (4): 443–48].

Classification of Biological Conditions of Food Deficit

Starvation—severest deficit linked to hunger and destitution;

- tip of the iceberg.

Chronic undernutrition—food intakes habitually lower than that necessary to meet genetic potential;

- Social and biological inter-generational link
- Diminished perception of 'adequate food' and of hunger due to habituation
- Largest segment of the malnourished—40-50% children mod-severe.
- Manifests as stunting in children.

Acute undernutrition—sudden lowering of food intake or lowered utilisation of the food ingested due to illness. Acute malnutrition in the normally well nourished tends to pass over and full recovery occurs; if the food deficit/disease persists for long, then chronic malnutrition could set in.

Acute on chronic undernutrition—sudden lowering of food intake or lowered utilisation of the food ingested due to illness in those already subsisting on lower energy intakes than required.

This is the condition of concern for today's discussion.

Acute on Chronic Undernutrition

- Sudden lowering of food intake or lowering of utilisation of the ingested food due to illness
- In those already living at the brink of subsistence :
 - Further increase in susceptibility and severity of disease.
 - A vicious cycle of malnutrition and disease sets in, and
 - Finally could end in death; IMR, Child death rate and adult death rates increase under such conditions.
- Could be a sporadic case, as due to illness in the individual and a vicious cycle of undernutrition and disease setting in.
- Or it could be an epidemic of acute undernutrition as a larger community level shortage of food.

With 40% households and 50% children in chronic undernutrition the danger of this happening in times of drought/flood, food price rise, sudden breakdown of livelihoods or food supplies etc. becomes very high.

Hunger

Psychic/hedonistic hunger= the feeling of desiring more food even when biological need is fulfilled (hedonistic /psychic hunger)

Incomplete need fulfillment =the feeling of need for more food with an intake that is less than fulfilling biological need

Hidden hunger=the condition of lower intake than required for achieving genetic potential but without the feeling of hunger due to habituation (as in chronic malnut.)

Hidden hunger=micronutrient deficiencies due to quality of food.

Classification of communities/populations by nutritional emergency status

Whole village/community near destitution, hunger and starvation, such as some remote tribal villages; maha-dalit communities in Bihar;

Heterogeneity in most populations/villages/communities—with some better-off with surplus; others having adequate in normal times but needing coping strategies during drought etc.; a substantial section BPL; and a section of households/individuals living lives of destitution. The last three have chronic malnutrition among children in significant proportions.

Varying proportions of these various economic classes requires diverse strategies in times of nutritional crisis. No state or district in the country seems to be without substantial number of households with inadequate food intakes, ranging from 10% to 80%.

[Underweight. Children 0-6 = 23% Kerala to 60% MP]

Diverse approaches to dealing with hunger and starvation in this context:

- Type 1--Requires state action in provisioning.
- Type 2--

Approaches would have to vary depending on the proportion of households needing specific inputs—
10-20% hh. with food deficit some time of the year; 20-40%; 40-70%; 70+%.

Better off could provide some support to the poor through community action

Broad Approaches:

- Macro level—Deal with the macro issues of employment and food availability/access. Universal PDS, agriculture etc. are the solutions
- Micro level--Identify the most vulnerable and address their situation urgently on an individual/household basis. Special focus on the most vulnerable such as destitute hhs., elderly, infants, single women, disabled, etc.
- Meso level —Identify communities with hunger through a system of nutritional surveillance that is able to give rapid rough results so as to provide them emergency relief collectively.
- Plurality of approaches with Contextual diversity--—1+(2 where few hungry hhs.; 3 where large no. of hhs.); 1+3+2 i.e. macro systemic solutions plus nutrition surveillance ongoing, identification of the most vulnerable to ensure their access to services, collective response whenever the nutrition surveillance shows that conditions of acute hunger are developing.

How do the administrators perceive the problem?

What information do they need to act?

WHAT EXACTLY CAN A DISTRICT COLLECTOR DO TO DETECT ACUTE HUNGER EARLY?

Possible Methods for Identifying Community Level Acute Food Deficits

Existing Methods in Use

1. **Starvation death** as marker of household hunger and destitution-may be extendable to community
2. **Identification of Drought affected areas**—based on rainfall and farm productivity
3. **Surveys for Self-reported Hunger [period of ‘not having two square meals a day’]**—indicates chronic undernut. unless repeated at short intervals and trends traced over years.

Proposed additional methods

4. Market off-take—from PDS+market—declines relative to previous years in a year of normal or low production.

5. Anthropometric Indicators

•Anthropometric indicators at individual level—

--[Adult/Children;

--Weight for height/Height for age/Weight for age/BMI

--Gomez classification, NCHS standards/z-scores/WHO stds]

•Anthropometric indicators at a collective level—sentinel surveillance for declines in anthropometry, eg using the ICDS monthly data

6. Village level listing of vulnerable population-- individuals / households/ communities-- for special attention by village level functionaries in communication with the community and Panchayats.

7. Rapid assessment of changes in food intake patterns --through group discussions in the community.

**HOW DO WE MAKE CHOICES
BETWEEN METHODS ??**

Diverse Scientific & Administrative Paradigms

HOLISTIC

VS

The REDUCTIONIST & PARTIAL

HOLISTIC vs REDUCTIONIST PARADIGMS

HOLISTIC

- Plurality of approaches
- Recognising Contextual Diversity
- Macro to micro levels of data and action
- Triangulation for multi-dimensionality of context
- Uncertainty and subjectivity is recognized
- Decentralised information and data base as well as community level action
- Complementarity of Action
Segments—Administration, Academic, Civil Society Organisations, Community

REDUCTIONIST

- Singular solutions
- Universalist, One size fits all
- Only one level of data and action—Macro or Micro
- Decontextualised data crunching
- Singular objectivity, certitude of evidence
- Centralised data bases with centralized management
- Supremacy of One's Own Role/Discipline Emphasised— little dialogue

HOW???

**THE METHODS AND TOOLS FOR
IDENTIFICATION , VERIFICATION AND
DETECTION OF ACUTE HUNGER**

1. STARVATION AS MARKER of HOUSEHOLD AND COMMUNITY HUNGER

2. Identification of Drought Affected areas

Based on rainfall and farm productivity

3. Surveys for Self-reported Hunger

Reported period of 'not having
two square meals a day'

4. MARKET OFF-TAKE—from PDS+OPEN MARKET

Declines relative to previous years in a
year of normal or low local food
production

5. Anthropometric indicators at a collective level

eg using the ICDS monthly data

As sentinel surveillance, not merely growth monitoring of the individual child

6. Village level listing of vulnerable population-- individuals / households/ communities

For special attention by village level functionaries in communication with the community and Panchayats

**7. Rapid assessment of changes in
food intake patterns
through group discussions in the
community.**

Socio-Medical Tool for Early Identification of Acute Hunger

Summary of Discussions

- Mapping vulnerable populations
 - Consistently reported starvation deaths, SC/ST, PTGs, special groups within communities (women headed households, disabled, aged)
 - Above average prevalence of SAM & Severe Undernutrition for 0-6 yrs
 - Using existing data
- Identifying signs of acute hunger
 - Community reporting of
 - Increased distress migration
 - Decrease in market off take of food (PDS & Open market)
 - Increased mortality from common illnesses

Summary of Discussions

- Community reporting of households with
 - Distress sale of assets
 - Begging for food
 - Consumption of pseudo foods
 - Distress borrowings from moneylenders
 - Distress migration

Summary of Discussions

- Tool to be approved at the National level
- Tool to be used by local groups to advocate for relief measures with local administration
- Advantage of the tool is that it will bring rigour to existing data collection efforts and make the process systematic
- Studies for mapping vulnerability

**CENTRE OF SOCIAL MEDICINE & COMMUNITY HEALTH
SCHOOL OF SOCIAL SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
New Delhi-110067**

6th May, 2010

Dear

The Centre of Social Medicine & Community Health-JNU, the Office of the Commissioner to the Supreme Court on the Petition of the PUCL vs UoI & others, Centre for the Study of Developing Societies--South Asian Dialogues on Ecological Democracy (CSDS-SADED) and Centre for Equity Studies (CES) are collaboratively organising a technical workshop to discuss the optional tools and methods for identification of starvation deaths and early signs of food shortage in a community such that it enables the civil administration to act effectively in response. The one-day **National Consultation on Developing Socio-medical Tools for Early Identification of Acute Hunger and Starvation for Effective Administrative Action** is to be held on the **13th May, 2010** at Jawaharlal Nehru University, School of Social Sciences-I Committee Room.


The problem of chronic malnutrition is a curse at least 40% of Indian households live with, 30-40% of adults and 50-60% of children below 6 years being undernourished. Methods for identifying the chronically malnourished through anthropometric indices using reference standards are fairly well worked out and in use. However, the methods for identifying **acute** hunger and malnutrition are less developed or used. While 'wasting', i.e. loss of weight against height, is the marker of a sudden or acute dip in food intake, it has several limitations, and there is little by way of a working consensus among nutritionists, public health persons and administrators on how to identify this in individuals, population groups and communities, especially for the Indian/South Asian context. Since these are relevant for emergency situations of acute food shortage and life-saving provisioning of foodgrain, there is a need to develop them on an urgent basis.

The primary objective of the identification under consideration is to develop working criteria that can be used at a mass level for initiating action by the administrative machinery. They could also be used to support advocacy for administrative action. A third purpose of this surveillance would be the mobilization of civil society and community level action on the issue of acute hunger.

Given your experience and expertise in relation to the subject, we would value your participation in a technical deliberation. Please do find the time to be with us and contribute in developing meaningful tools that can be operationalised for minimizing the hunger and starvation. Travel by 2nd AC train or air will be reimbursed and local hospitality provided. Our apologies for the short notice.

With best wishes and regards,

Ritu Priya
(Professor,
Centre of Social Medicine
& Community Health, JNU)


Harsh Mander
(Special Commissioner, Supreme Court
& Director, Centre for Equity Studies)

Enclosed: (1) Concept Note, (2) Tentative Programme

National Consultation on Developing Tools for Early Identification of Acute Hunger for Effective Administrative Action

The Centre of Social Medicine & Community Health, JNU, the Office of the Commissioner to the Supreme Court on the Petition of the PUCL vs GOI, CSDS-SADED and Centre for Equity Studies are organising a technical workshop to discuss the optional tools and methods for identification of starvation deaths and early signs of food shortage in a community such that it enables the civil administration to act effectively in response.

The Problem

The problem of chronic malnutrition is a curse at least 40% of Indian households live with, 30-40% of adults and 50-60% of children below 6 years being undernourished. Methods for identifying the chronically malnourished through anthropometric indices using reference standards are fairly well worked out and in use. Of course, the uncertainty and probabilistic nature of any such assessment constantly leads to contentions and further refining of the methods, from the Gomez classification to the z-score based cut-offs, to the reference curves and to the most recent WHO standards for child growth of 2006. The ICDS is meant to regularly measure weight of each child registered with the anganwadi and plot it against a graph that marks the expected healthy increase of weight by age.

However, the methods for identifying *acute* hunger and malnutrition are less worked out. There is little by way of a working consensus among nutritionists, public health persons and administrators on how to identify this in individuals, population groups and communities, especially for the Indian/South Asian situation. Since these are relevant for emergency situations of acute food shortage and life-saving provisioning of foodgrain, there is a need to develop them on an urgent basis.

Given the high levels of chronic undernutrition, a high proportion of our people live at bare subsistence consumption of food. Any further lowering of food intake leads to loss of survival. While 'wasting', ie. loss of weight against height, is the marker of a sudden or acute dip in food intake, it has several limitations. One is the operational barrier of heights being difficult to measure with reasonable accuracy in field conditions by community level workers. Weights are easier to measure and are more inclusive for assessment of malnutrition. The second is that acute malnutrition is often accompanied by communicable disease and this can be viewed as the primary problem and argued that the loss of weight has been secondary to it. If the child dies, the disease is often contended to be the cause of death rather than the deficiency of food. Given this perception, the response then is to provide medical care and not food relief. Systems of nutritional surveillance need to be set up that can detect acute declines in access to food and nutritional status early enough so that public action can minimise the hunger and starvation.

The primary objective of the identification under consideration is to inform the definition of criteria that can be for used at a mass level for initiating action by the administrative machinery. They could also be used to support advocacy for administrative action. A third purpose of this surveillance would be the mobilization of civil society and community level action on the issue of acute hunger.

Identification for Administrative Action

Currently there are two ways in which the administration recognizes acute hunger and responds with pre-emptive action.

1. One is by acting in favour of a household where a starvation death has occurred to provide relief to its surviving members. Starvation, ie death due to severe deficiency of food intake, which is below the energy requirement of basic physiological functioning, has been conventionally identified by the civil administration by an autopsy that shows presence of no food in the stomach. Then the household of the person who died of starvation, gets emergency relief (10kg. food grain, work for food etc.). As per the colonial Famine Code, even 2 grains of rice found in the stomach is 'proof' against starvation as cause of death. This definition often makes it difficult for the civil administration to accept the 'proof' of a starvation death despite all circumstantial evidence to support the contention.

A JSA group had worked on this problem some years ago and has developed a methodology for identifying starvation deaths for initiation of administrative action and advocacy for the same. The office of the Commissioner of the Supreme Court in the case of PUCL vs GOI has also worked out a methodology for identifying deaths that require urgent relief for the household of the dead person. It addresses many of the challenges faced in investigating any reported cases of starvation deaths in a meaningful way for the people suffering such levels of destitution. We would like to discuss these and any others, so that all of us can be better informed on them as well as create a consensus on what is the technically appropriate method for the stated objectives.

2. Other than starvation deaths that draw attention to the plight of individual households, there is the provision for declaring districts as 'drought affected', so that then relief works and other measures for application at population level can be initiated. This is an extremely important measure and its implementation requires to be strengthened.

However, this measure has its limitations. For instance it will not apply to a situation of food shortage which is due to rise in food prices or a situation of sudden unemployment such as closure of factories. Also it will not be able to identify specific pockets of hunger and the most vulnerable are often left out as beneficiaries of the relief works. Some community level means of identification have to be developed for local action. The method(s) will need to have a ready data source that allows constant monitoring or surveillance of nutritional status and a system for quick recognition of declines in it.

At one level, the local situation can be monitored by economic data such as trends in the sale of foodgrains in the area. The second method possible is by data on consumption of food items, and the third is by anthropometry. It is considered worthwhile to develop multiple ways of surveillance and a system that is able to use them all together. The surveillance should also be closely linked to a response mechanism that immediately acts on the information about declines in nutritional status. One suggestion, as in the attached note, is about using the ICDS growth monitoring system for not only the individual level identification of child malnutrition but also for surveillance of the collective situation in the community.

There is need to discuss all the possible options and form a working consensus on what would be the best tools and methodology for early identification of acute food shortage and hunger *before* it results in starvation deaths, given the present knowledge and possible sources of data as well as the requirements for the civil administration to act. This may be useful for responding to the immediate crisis at hand. However, for building systems in the longer term, we would not like to restrict ourselves to the present constraints of data sources and would like a detailed discussion on what could the wish list of tools be for the most effective and rational methodology .

Thus, we hope to have one session at the brainstorming for presentation of the methods for identifying starvation deaths, with initial presentation of the various methodologies. The post-lunch session would deal with other tools for early identification of acute hunger at a collective level. The focus is explicitly on developing tools that enable the administration to institute emergency responses through a multiplicity of pathways.

Tentative Programme

Venue: Committee Room, School of Social Sciences-I

Jawaharlal Nehru University, N.D-110067

Date: 13th May, 2010

9.00am: Registration & Tea

9.30am: Welcome: Rama Baru, Chairperson CSMCH

Introduction to the Workshop

Introduction of Participants

10am-1pm: Technical Session I

Chair—N.C. Saxena

1. Challenges in Identification and Verification of Starvation Deaths & Acute Hunger --Harsh Mander
2. Overview of Public Health Approach to Early Detection of Acute Hunger : the Challenges & Possibilities—Ritu Priya
3. Guidelines by the Jan Swasthya Abhiyan Hunger Watch Group on Verification of Starvation Deaths & Detection of Hunger in the Community —Vandana Prasad

11-11.15am TEA

4. Experiences of the Investigations into Starvation Deaths—State Advisors to the Commissioner's Office

Round Table Discussion on Criteria for Defining and Verifying Starvation

Closing remarks for 1st session by Abhijit Sen

1-2pm: LUNCH

2-5pm: Technical Session II

Round Table Discussion on Methods for Early Detection of Acute Food Deficits in the Community

Chair—Imrana Qadeer

1. Tools based on Food Production, Availability & Access
2. Anthropometric Tools

3.30-3.45 TEA

Discussion on Draft Resolution

1. On the definition and identification of starvation death
2. On methods for early detection of large scale acute hunger

5.15-5.30 TEA & Snacks

Management of severe acute malnutrition in children

Steve Collins, Nicky Dent, Paul Binns, Paluku Bahwere, Kate Sadler, Alistair Hallam

Lancet 2006; 368: 1992–2000

Published Online
September 26, 2006
DOI:10.1016/S0140-
6736(06)69443-9

Valid International Ltd, Oxford,
UK (S Collins MD, N Dent MSc,
P Binns RGN, P Bahwere MD,
K Sadler MSc, A Hallam BM BCh);
and Centre for International
Child Health, Institute of Child
Health, Guilford Street,
London, UK (S Collins, K Sadler)

Correspondence to:
Dr Steve Collins, Valid
International Ltd, Unit 14
Standingford House, 26 Cave
Street, Oxford
OX4 1BA

steve@validinternational.org

Severe acute malnutrition (SAM) is defined as a weight-for-height measurement of 70% or less below the median, or three SD or more below the mean National Centre for Health Statistics reference values, the presence of bilateral pitting oedema of nutritional origin, or a mid-upper-arm circumference of less than 110 mm in children age 1–5 years. 13 million children under age 5 years have SAM, and the disorder is associated with 1 million to 2 million preventable child deaths each year. Despite this global importance, child-survival programmes have ignored SAM, and WHO does not recognise the term “acute malnutrition”. Inpatient treatment is resource intensive and requires many skilled and motivated staff. Where SAM is common, the number of cases exceeds available inpatient capacity, which limits the effect of treatment; case-fatality rates are 20–30% and coverage is commonly under 10%. Programmes of community-based therapeutic care substantially reduce case-fatality rates and increase coverage rates. These programmes use new, ready-to-use, therapeutic foods and are designed to increase access to services, reduce opportunity costs, encourage early presentation and compliance, and thereby increase coverage and recovery rates. In community-based therapeutic care, all patients with SAM without complications are treated as outpatients. This approach promises to be a successful and cost-effective treatment strategy.

Introduction

Severe acute malnutrition (SAM), is defined as a weight-for-height measurement of 70% or more below the median, or three SD or more below the mean National Centre for Health Statistics reference values (that will likely be replaced by new WHO growth curves¹), which is called “wasted”; the presence of bilateral pitting oedema of nutritional origin, which is called “oedematous malnutrition”;² or a mid-upper-arm circumference of less than 110 mm in children age 1–5 years.^{3,4} Many advanced cases of SAM are complicated by concurrent infective illness, particularly acute respiratory infection, diarrhoea, and gram-negative septicaemia. By contrast, chronic malnutrition (termed “stunted”) is defined by a height-for-age indicator. In addition, a composite form of malnutrition including elements of both stunting and wasting is defined with a weight-for-age indicator. As these different forms of malnutrition have different causes and require substantially different treatments, clear nomenclature to differentiate them is needed.

Case-fatality rates in hospitals treating SAM in developing countries average 20–30% and have remained unchanged since the 1950s⁵ despite the fact that clinical management protocols capable of reducing case-fatality rates to 1–5% have been in existence for 30 years. In 1992, this failure to translate scientific knowledge of what is needed to treat malnutrition into effective large-scale interventions, was criticised as “nutrition malpractice”;⁶ 13 years and numerous studies and clinical manuals later, there is an even greater discrepancy between actual practice in most institutions treating SAM and our knowledge of what works.

The treatment of severe acute malnutrition occupies a unique position between clinical medicine and public health. The causes are essentially poverty, social exclusion, poor public health, and loss of entitlement,⁷ and most cases can be prevented by economic development and public-health measures designed to increase dietary quantity and quality alone, with no need for clinical input.

However, as acute malnutrition becomes more severe, normal physiological mechanisms that adapt the organism to low food intake become more pronounced.^{8–12} These “reductive adaptations” affect every physiological function in the body,^{13–15} mobilising energy and nutrient reserves and decreasing energy and nutrient demands; they are initially beneficial and allow the organism to maintain homeostasis. However, as the severity of nutritional insult increases, these adaptations progressively limit the body’s ability to respond to stresses such as infection.^{15–17} In practice, inpatient units treating SAM are commonly confronted by extremely ill patients who need intensive medical and nursing care. Most of these units are in the poorest parts of the poorest countries and have severe capacity constraints, in particular, very few skilled staff. In addition, most carers of malnourished patients come from the poorest families and have great demands on their time. To achieve an impact at a population level, management protocols must take these socioeconomic realities into account, balancing the potentially conflicting demands and ethics of clinical medicine with those of public health.

Worldwide public-health significance of malnutrition

Malnutrition is a major public-health problem throughout the developing world and is an underlying factor in over 50% of the 10–11 million children under 5 years of age who die each year of preventable causes.^{18–21} However, while the child-survival movement commonly acknowledges the importance of undernutrition, defined as low weight for age,²² the importance of acute malnutrition is seldom mentioned. For example, none of the five papers of the recent child survival series in *The Lancet* mention acute malnutrition.²² This is a serious omission; acute malnutrition is an extremely common disorder, associated with high rates of mortality and morbidity and requiring specialised treatment and prevention interventions. Worldwide there are about 60 million children with moderate acute and 13 million with severe acute

malnutrition. About 9% of sub-Saharan African and 15% of south Asian children have moderate acute malnutrition^{23,24} and about 2% of children in developing countries have SAM.²⁴ In India alone, 2.8% of children under 5 years of age (over 5 million children) are severely wasted²⁵⁻²⁷ and in many poor countries such as Malawi, SAM is the commonest reason for paediatric hospital admission.²⁸

The risk of mortality in acute malnutrition is directly related to severity: moderate wasting is associated with a mortality rate of 30–148 per 1000 children per year^{29,30} and severe wasting is associated with a mortality rate of 73–187 per 1000 children per year.²⁹ This equates to over 1.5 million child deaths associated with severe wasting and 3.5 million with moderate wasting every year. These numbers do not include children who die of oedematous malnutrition (kwashiorkor), a form of SAM that in some countries is more common than the wasted form, and probably, therefore, underestimate the total number of child deaths directly associated with acute malnutrition (table).

High case-fatality rates for SAM

Over the past 50 years, in most resource-poor settings, case-fatality rates for severe malnutrition treated in health facilities have remained at 20–30% for marasmus (wasting malnutrition) and up to 50–60% for kwashiorkor.^{5,31} By contrast, since the 1970s there have been management protocols capable of achieving case-fatality rates of 1–5%,^{15,32,33} and well-resourced humanitarian agencies using these protocols frequently achieve mortality rates under the 10% level stipulated in the international Sphere Project standards.^{4,34,35}

Current management protocols

At present, an exclusive inpatient approach to the clinical care of SAM is recommended. The core of accepted

WHO management protocols is ten steps in two phases (stabilisation and rehabilitation).^{2,36-39} The approach requires many trained staff and substantial inpatient bed capacity. Where these are available and sufficient attention is paid to the quality of care, there is good evidence that these protocols can substantially decrease case-fatality rates in both stable environments^{33,40-44} and during emergency humanitarian interventions.^{34,45} However, despite the success of these protocols when implemented in specialised units, their publication has not led to widespread decreases in case-fatality rates in most hospitals in the developing countries.^{46,47}

The persistence of high case-fatality rates is commonly attributed to inappropriate case management as a result of poor knowledge.^{5,48} The accepted view is that wider implementation of the WHO guidelines through in-service training and incorporation into medical and nursing curricula is the key to substantially decreasing case-fatality rates worldwide.^{25,37,49-52} However, whereas there is good evidence that adequate training of health staff in the management of SAM is essential if the implementation of the WHO guidelines is to be effective, the evidence base supporting the view that the wider implementation of the WHO guidelines is key to the reduction of case-fatality rates is weak. There have been no published controlled trials looking at the effect of the use of the WHO protocol in operational settings. In their absence, the evidence of the positive effects of these protocols comes from observational studies done in a few selected hospitals or well-resourced, non-governmental-organisation, humanitarian operations. These studies all suggest that the availability of sufficient resources,⁵³ particularly skilled and motivated health staff, is a vital determinant of success and effectiveness. In practice, the many skilled staff needed are rarely available. For example, in Malawi in 2003–04 there were only 1.13 physicians and 25.6 nurses per 100 000 people,⁵⁴

Regions†	Under-5 population 2000 (×1000)	Wasting prevalence (%)		Wasting numbers (×1000)		Annual mortality numbers		
		Moderate and severe	Severe	≥2 Z scores below WFH	≥3 Z scores below WFH	2–3 Z scores below WFH*	≥3 Z scores WFH†	Total
Sub-Saharan Africa	106 394	10	3	10 639	3192	565 768	421 767	987 535
Middle East and north Africa	44 478	7	2	3114	890	168 942	117 547	286 489
South Asia	166 566	15	2	24 985	3331	1 644 950	440 201	2 085 151
East Asia and Pacific	159 454	4	-	6378	-	484 528	-	484 528
Latin America and Caribbean	54 809	2	0	1096	-	83 273	-	83 273
CEE-CIS and Baltic states	30 020	4	1	1201	300	68 416	39 668	108 084
Industrialised countries	50 655	-	-	-	-	-	-	-
Developing countries	546 471	9	2	49 182	10 929	2 905 951	1 444 214	4 350 164
Least developed countries	110 458	10	2	11 046	2209	671 290	291 918	963 209
Total	707 584			60 228	13 139	3 577 241	1 736 132	5 313 373

Population and prevalence of wasting from UNICEF global database on child malnutrition 2001.²⁴ CEE-CIS=Central and Eastern Europe and Commonwealth of Independent States. WFH=weight-for-height index. *Moderate mortality rate=76/1000/year (average of nine studies range 30–148 for children with <80% weight for height or <2 Z scores). †Severe mortality rate=132/1000/year (average of five studies, range 73–187 children with mid-upper-arm circumference <110 mm).²⁹

Table: Worldwide burden of acute malnutrition in children aged less than 5 years

15 of the 26 districts had on average fewer than 1.5 nurses per facility, and five districts had fewer than one nurse per facility; there were ten districts without a Ministry of Health doctor, and four districts without any doctor (Vujicic M, World Bank, personal communication). Perhaps as a result of these constraints, the use of similar protocols had little effect on CFRs in nutrition rehabilitation units in Malawi, only reducing them from 25% to 20%.⁵⁵ The paucity of skilled health staff is not restricted to Malawi and in 20 of the African countries most affected by acute malnutrition there are fewer than four doctors and 22 nurses per 100 000 people.⁵⁴ The World Bank has identified the lack of skilled human resources as a fundamental constraint to the improvement of health outcomes and the reaching of Millennium Development Goals.⁵⁶ In practice, shortages of skilled staff commonly preclude the effective and sustainable implementation of WHO guidelines for the management of SAM.

Effect of HIV and tuberculosis

HIV and tuberculosis are increasing the workloads of hospital units treating SAM through both the direct effects of infection and the indirect negative effects on livelihoods and food security. HIV and tuberculosis infection decrease skilled human resource capacity in health services, raise the prevalence of SAM, and increase case-fatality rates.^{43,44,57,58} In sub-Saharan Africa, a high proportion of severely malnourished children admitted to nutritional rehabilitation units are now also HIV positive,^{55,57-63} particularly those with marasmus.^{57,59} In 2000 in Malawi for example, 34% of the severely malnourished children admitted to the Blantyre Queen Elizabeth hospital nutritional rehabilitation unit were HIV positive.⁵⁷ Although experience in resource-poor, sub-Saharan countries has shown that many HIV-positive children can recover normal nutritional status when given standard treatment protocols for SAM without antiretroviral drugs,^{58,64} their recovery is slower than that of uninfected children. HIV infection is also associated with high rates of complication and case fatality.^{55,57,59}

Treatment at home and in the community

Concerns over the limited capacity of hospital units to treat SAM are not new. Since the 1960s, the high cost and poor success rates of inpatient treatment have prompted debate over whether hospitals were the best places to treat SAM.^{65,66} There are several well-known weaknesses of a centre-based approach: limited inpatient capacity and lack of enough skilled staff in hospitals to treat the large numbers needing care;^{67,68} the centralised nature of hospitals promotes late presentation and high opportunity costs for carers; and the serious risks of cross infection for immunosuppressed children with SAM and the high mortality rates before and after discharge.^{31,69-72} These concerns persist today.⁷³

In the 1970s, these problems prompted moves to demedicalise the treatment of SAM and move the locus of treatment away from hospitals to communities, into either simple nutrition rehabilitation centres, existing primary health-care clinics, or the homes of those affected.^{31,74} The results from early outpatient treatment programmes were variable. Some achieved low mortality and positive effects on growth while children were attending nutrition rehabilitation centres, but usually these benefits were not maintained after discharge.⁷⁵⁻⁷⁷ In others, mortality and relapse rates both during treatment and after discharge were high^{72,78} and rates of weight gain were low.^{79,80} The requirement for children to attend each day and eat in the nutrition rehabilitation centres has also resulted in low programme coverage, often proving to be unpopular with mothers and resulting in high default rates.⁴²

In 2001, Ashworth reviewed 27 such programmes from the 1980s and 1990s.⁸¹ Only six (22%) of the 27 achieved case-fatality rates of less than 5%, average weight gains of more than 5 g/kg/day, and relapse or readmission rates of less than 10%—Ashworth concluded that home treatment is rarely successful⁸¹ and that the early discharge of severely malnourished patients from inpatient treatment units is usually hazardous.⁵² In 2005, Ashworth updated her review to include an additional six studies of ready-to-use therapeutic food. Five (83%) of these six studies were considered to be successful; a far greater success rate than in those studies not using ready-to-use therapeutic food.⁸²

Two other programmes, both in Bangladesh, have reported successful rehabilitation of children with SAM discharged to home care after 1 week of inpatient management with mixtures of local foods combined with the provision of multivitamins and minerals.^{42,83} The costs for home-based treatment of US\$29 and US\$22.30 were substantially lower than those of US\$156 and US\$74.60 for hospital care.^{83,84} Similar improvements in cost-effectiveness of care were seen in home-treatment programmes in Jamaica.⁸⁵

Ready-to-use therapeutic food

The Ashworth review indicates that the recent development of ready-to-use therapeutic food has greatly eased the difficulties associated with providing a suitable high-energy, nutrient-dense food that is safe for use in outpatient programmes. Ready-to-use therapeutic food is an energy-dense food enriched with minerals and vitamins, with a similar nutrient profile but greater energy and nutrient density than F100, the diet recommended by WHO in the recovery phase of the treatment of SAM.⁸⁶ In contrast to the water-based F100, ready-to-use therapeutic food is an oil-based paste with an extremely low water activity.⁸⁷ As a result, ready-to-use therapeutic food does not grow bacteria even when accidentally contaminated,⁸⁸ allowing it to be kept unrefrigerated in simple packaging for several months. As the food is eaten uncooked,

heat-labile vitamins are not destroyed during preparation and the labour, fuel, and water demands on poor households are minimised. The production process is simple, and ready-to-use therapeutic food can be made from local crops⁸⁹ with basic technology that is readily available in developing countries.^{90,91}

In a clinical trial in severely malnourished children in Senegal, energy intakes (808 kJ/kg/day vs 573 kJ/kg/day, $p < 0.001$), rates of weight gain (15.6 g/kg/day vs 10.1 g/kg/day, $p < 0.001$) and time to recovery (17.3 days vs 13.4 days, $p < 0.001$) were all significantly greater in those receiving ready-to-use therapeutic food than in those receiving F100.⁹² Trials in Malawi have also successfully used a take-home ration given to children in the recovery phase of the treatment of SAM. In one, a take home ration of 730 kJ/kg/day (175 kcal/kg/day) successfully rehabilitated HIV-negative, severely malnourished children, after early discharge from a nutrition rehabilitation units providing initial, phase-one care according to WHO protocols. Rates of weight gain (5.2 g/kg/day vs 3.1 g/kg/day) and the proportion of children recovering to 100% weight for height (95% vs 78%, relative risk [RR] 1.2, 95% CI 1.1–1.3) were significantly better in the ready-to-use therapeutic food groups when compared with groups receiving a larger amount of energy from corn-soya-blend flour supplied by the World Food Programme.²⁸ In the same trial, 56% of the HIV-positive children treated with ready-to-use therapeutic food also achieved 100% weight for height.⁶⁴ In another trial implemented in rural nutrition-rehabilitation units, 730 kJ/kg/day of locally made ready-to-use therapeutic food given during the rehabilitation phase of treatment produced significantly better rates of weight gain (3.5 g/kg/day vs 2.0 g/kg/day), recovery (79% vs 46%, RR 2.8 95% CI 2.5–3.1), and mortality (3.0 vs 5.4%, OR 0.5, 95% CI 0.3–0.7) than did the standard inpatient treatment with F100, followed by outpatient supplementation with a large one-off ration (50 kg) of corn-soya-blend flour.⁹³ However, the rates of weight gain on the ready-to-use therapeutic food regime were far lower than the 10–15 g/kg/day that can be achieved with a ration of 730 kJ/kg/day. The combination of low rates of weight gain and low mortality rates indicates that this was probably due to sharing of the ration.

The development of ready-to-use therapeutic food has allowed much of the management of SAM to move out of hospitals. By shortening the duration of inpatient treatment from an average of 30 days to only 5–10 days, the move towards using ready-to-use therapeutic food in the recovery phase of treatment reduces the resources needed to treat SAM, which improves cost-effectiveness. The provision of phase-one inpatient care for all cases, however, still requires substantial resources and entails substantial opportunity costs for carers. A requirement for inpatient care also means that programmes must be implemented from hospitals and large clinics with

inpatient facilities. Centralised treatment increases barriers to access for rural communities where acute malnutrition is most prevalent. Increased barriers to access and opportunity costs serve to delay presentation, making the disorder harder to treat, and increase the number of patients with complications. These barriers increase costs and case-fatality ratios⁵⁵ and decrease the proportion of severely malnourished children who are able to access treatment, thereby reducing coverage (unpublished).

Community-based management of acute malnutrition

During the past 5 years, a growing number of countries and international relief agencies have adopted a community-based model for the management of acute malnutrition, called community-based therapeutic care.^{94–97} This model provides a framework for an integrated public-health response to acute malnutrition, treating most patients with SAM solely as outpatients and reserving inpatient care for the few with SAM and complications.⁷³ The model also aims to integrate treatment with various other interventions designed to reduce the incidence of malnutrition and improve public health and food security. Programme design attempts to take into account the socioeconomic factors, particularly poverty, high workloads for women, and the exclusion from health and education services that contribute to the late presentation of cases of acute malnutrition. Programmes are therefore very decentralised to minimise geographical barriers to access⁷³ and include intensive community consultation and mobilisation to maximise understanding and participation. This design minimises the costs to families and maximises access to treatment.⁹⁸ The decentralised design also means that, in non-emergency situations, there are few cases of SAM at any one access point and the quantities of ready-to-use therapeutic food required to treat them are therefore small. In current Ministry of Health implemented programmes in Malawi, for example, a health-centre treating 15 children with SAM per month requires 160 kg (eight boxes) of ready-to-use therapeutic food. This small quantity can be delivered easily together with other routine health supplies. This eases the problems associated with integrating community-based therapeutic care into existing health services, even in resource-poor settings.

The use of mid-upper-arm circumference as the sole anthropometric indicator for screening and admission into community-based therapeutic care also facilitates community participation, helping to devolve responsibility for selection of patients towards the community. Mid-upper-arm circumference is an indicator of acute malnutrition that reflects mortality risk^{99–102} and has recently been endorsed as an independent criterion for admission into therapeutic feeding programmes by an informal consultation of WHO.^{103,104} The use of this

measure requires no complicated equipment and can easily be taught to community-based workers, making it practical for use in resource-poor settings.^{105,106}

Community-based therapeutic care's clinical approach is based on the fact that the severity of SAM, its prognosis, and the determinants of successful treatment are primarily dependent on the time to presentation.^{28,30,55,68,99,107,108} SAM is classified on the basis of whether there are coexistent life-threatening complications¹⁰⁹ (figure). Children presenting with SAM complicated by life-threatening illness receive inpatient care according to the WHO treatment protocols. Those with SAM but without life-threatening complications are treated through weekly or fortnightly attendance in outpatient therapeutic programmes. In outpatient therapeutic programmes, they receive an 837 kJ/kg/day (200 kcal/kg/day) take-home ration of ready-to-use therapeutic food, a course of oral broad-spectrum antibiotics, vitamin A, folic acid, anthelmintics and, if appropriate, antimalarials. To increase access to treatment and encourage earlier presentation, outpatient therapeutic programmes are decentralised and implemented through standard primary health-care units or even non-permanent access points. This approach results in most children presenting at a stage when they can still be treated effectively as outpatients by front-line health staff, which greatly reduces the need for trained clinic staff, thereby easing integration into routine health services.

Case-fatality rates among 23 511 unselected severely malnourished children treated in 21 programmes of community-based therapeutic care in Malawi, Ethiopia, and Sudan, between 2001 and 2005, were 4.1%, with recovery rates of 79.4% and default rates of 11.0%. 74% of these severely malnourished children were treated solely as outpatients.^{94,95,103} Coverage rates for nine of these programmes have been estimated with a new coverage-survey technique designed to provide more precise coverage estimates of health-care programmes.¹¹⁰ Average coverage was 72.5%,^{95,103} substantially higher than coverage rates seen in comparable centre-based programmes which are often less than 10%.^{111,112} Similar positive results have recently been published from Niger, where Médecins Sans Frontières (MSF) cared for more than 60 000 children with SAM with an approach based on outpatient therapeutic programmes. About 70% of patients were treated solely as outpatients and overall case-fatality ratios were about 5%.¹¹³

Community-based therapeutic care has also shown promise as an intervention to assist children with SAM infected with HIV. A cohort trial in Malawi assessed the effectiveness of community-based therapeutic care in the treatment of SAM in HIV-positive and HIV-negative children and examined its use as an entry point for home-based care programmes targeting people living with HIV/AIDS.¹¹⁴ 59% of the severely malnourished HIV-positive children not receiving antiretroviral drugs recovered compared with 83.4% of the HIV-negative

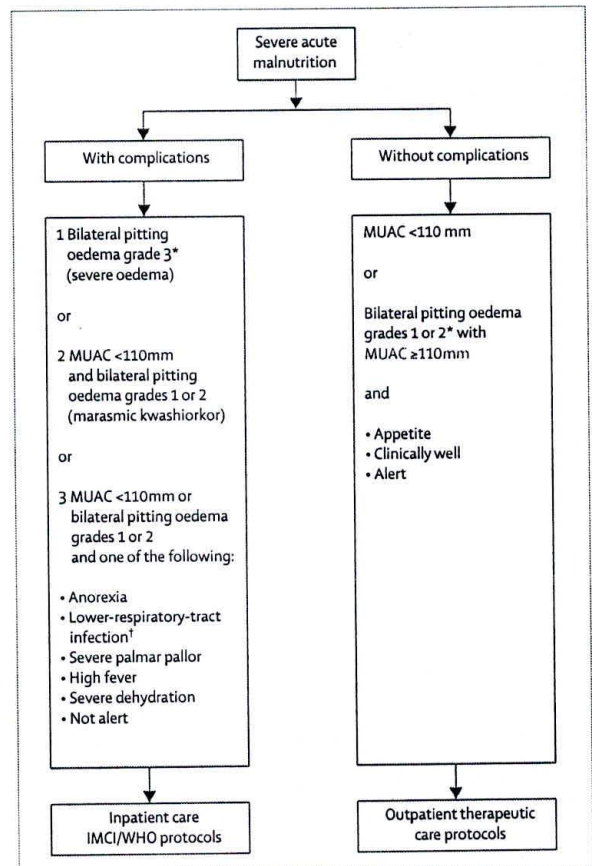


Figure: Classification of severe acute malnutrition used in community-based therapeutic care

MUAC=mid-upper-arm circumference. IMCI=Integrated Management of Childhood Illness. *Grade 1=mild oedema on both feet or ankles; grade 2=moderate oedema on both feet, plus lower legs, hands, or lower arms; grade 3=severe generalised oedema affecting both feet, legs, hands, arms, and face. †IMCI criteria:³⁹ 60 respirations/min children age <2 months; 50 respirations/min for age 2–12 months; 40 respirations/min for ages 1–5 years; 30 respirations for age >5 years.

children ($p < 0.002$, unpublished). However, at a mean follow-up of 15 months after discharge, 53% of HIV-positive children had relapsed into moderate acute malnutrition compared with 10.4% of the HIV-negative children. HIV-positive children therefore need continual community-based monitoring after discharge and, for treatment to be optimally effective, community-based programmes for SAM must be integrated with home-based care and antiretroviral-drug programmes for HIV. In this study, the uptake rate for voluntary counselling and testing for children attending the programme was greater than 90%, far greater than usually seen in Malawi (unpublished). This finding shows a high potential for synergy and integration between community-based therapeutic care, home-based care, and antiretroviral-drug programmes for HIV.

Programmes of treatment for SAM tend to be highly cost effective in terms of additional years of life gained

because they precisely target resources at children with a very high mortality risk. Initial data indicate that the cost-effectiveness of emergency community-based therapeutic care is comparable to mainstream child-survival interventions, such as vitamin-A provision or oral rehydration therapy for diarrhoeal disease. Estimates from two established emergency programmes were US\$101–197 per admission which is equivalent to between US\$12 and US\$132 for each year of life gained dependent on the assumptions made for the mortality rates of untreated SAM.¹¹⁵ The exact figure depends on the density and prevalence of severe acute malnutrition, the numbers of acutely malnourished children treated, the infrastructure present, accessibility, and the estimation of case-fatality ratios in untreated SAM.^{103,115} Although these are broad ranges, they are below the \$150 threshold described by the World Bank as highly cost-effective. The development of local production of ready-to-use therapeutic food with new cheaper recipes based on locally available grains and pulses should further reduce costs.

Conclusion

Where sufficient resources are available, the WHO inpatient treatment model for SAM can achieve low case-fatality rates. However, exclusive inpatient treatment strategies are resource-intensive and require many skilled staff. Because the prevalence of SAM is highest in resource-poor environments, there is usually a substantial mismatch between the many patients requiring treatment and few skilled staff and scarce resources available to treat them. The HIV/AIDS pandemic is further lowering resource availability and increasing the numbers of acutely malnourished children, aggravating this mismatch and increasing case-fatality rates.

New approaches for the management of SAM, such as community-based therapeutic care, complement the existing WHO inpatient protocols. These programmes use ready-to-use therapeutic food to treat most children suffering from SAM as outpatients, reserving inpatient treatment for those with complications. They are designed to decrease barriers to access, encourage earlier presentation, reduce opportunity costs associated with treatment, and encourage compliance by patients. Treatment of most patients with SAM solely as outpatients reduces inpatient caseloads to more manageable levels, which helps decongest crowded inpatient units, decreases the risks of nosocomial infection, and increases the time available to staff to devote to the sickest children. These new approaches have greatly reduced case-fatality rates and increased coverage rates—initial data indicate that they are very cost effective.

The way forward

Community-based therapeutic care should now be scaled up in both emergency and non-emergency settings and appropriate training included in medical, nursing, and

primary health-care curricula. To start this process, WHO, UNICEF, and the UN Standing Committee on Nutrition recently convened an informal consultation on the community-based management of severe malnutrition in children. The meeting began the process of incorporating these techniques into the WHO guidelines.¹⁰³ This is an essential step. However, improvements in treatment protocols, programme design, and training are, by themselves, insufficient. If community-based therapeutic care is to attain its maximum potential in reducing avoidable child mortality, there must be changes in funding priorities and child survival strategies. Leveraging these changes will require strong evidenced-based advocacy highlighting the global importance of SAM and communicating clearly the fact that highly cost-effective interventions exist.

WHO should adopt the term “acute malnutrition” to differentiate wasting and oedematous malnutrition from growth faltering and stunting. Acute malnutrition has different causes, different indicators, and requires different interventions to chronic malnutrition. Without a clear and appropriate nomenclature these differences are obscured, which results in confusion over treatment strategies and mixed messages going out to policymakers.

Second, the global importance of SAM as a major cause of avoidable mortality must be better communicated and the child survival agenda must give greater priority to treatment of the disorder. This requires SAM to be included as a specific cause of death in mortality-surveillance data and included as a diagnosis in standard morbidity surveillance. Without this, the high numbers of deaths and high morbidity attributable to SAM will continue to go unrecorded and un-noticed.

Third, nutritionists should communicate the fact that there are successful and highly cost-effective interventions for SAM. Although the hospital-based treatment of SAM is more cost-effective than many of the mainstream child-survival interventions, such as treatment of severe diarrhoea in hospitals or vitamin-A distribution,^{112,116} this has been poorly communicated to policymakers and funders. Community-based therapeutic care promises to increase this cost-effectiveness further. There is a need for more cost effectiveness data and for these findings to be communicated to policymakers.

Last, an appropriate indicator of acute malnutrition, such as mid-upper-arm circumference, should be included as a standard element in both growth monitoring programmes and integrated management of childhood illness to allow these programmes to diagnose acute malnutrition more effectively. This indicator is essential if cases of SAM are to be caught early, before complications arise and while cheap outpatient treatment is possible. At present, growth-monitoring programmes do not include any indicator of acute malnutrition and integrated management of childhood illness includes only “visible severe wasting”, an indicator that is subjective, difficult to use in practice,

and unreliable.^{104,117} Mid-upper-arm circumference is easy to use and efficient at identifying those children who need specialist interventions—without this, most cases of SAM will go undiagnosed and untreated.

Achieving the fourth Millennium Development Goal of a two-third reduction in childhood mortality will not be possible unless SAM is addressed effectively. For interventions to fulfil their potential, policymakers must give SAM an urgency commensurate with its global importance as a leading cause of preventable childhood mortality.

Conflict of interest statement

The authors work for Valid International Ltd, an organisation that has been engaged in the research and development of community-based therapeutic care. S Collins and A Hallam are also unpaid directors of Valid Nutrition, a not-for-profit company established to research and manufacture ready-to-use therapeutic food in developing countries.

Acknowledgments

This work was supported by funding from Concern Worldwide. Concern Worldwide has been engaged in the research and development of community-based therapeutic care but has had no influence over the text of this review.

References

- WHO. WHO child growth standards. *Acta Paediatr* 2006; 95 (suppl): 1–101.
- WHO. Management of severe malnutrition: a manual for physicians and other senior health workers. Geneva: WHO, 1999.
- UNHCR. Handbook for emergencies, 2nd edn. Geneva: UNHCR, 1999.
- SPHERE project team. The SPHERE humanitarian charter and minimum standards in disaster response, 2nd edn. Geneva: The SPHERE Project, 2003.
- Schofield C, Ashworth A. Why have mortality rates for severe malnutrition remained so high? *Bull World Health Organ* 1996; 74: 223–29.
- Berg A. Sliding towards nutrition malpractice; time to reconsider and redeploy. *Am J Clin Nutr* 1992; 57: 3–7.
- UNICEF. Strategy for improved nutrition of children and women in developing countries. New York: UNICEF, 1990.
- Cahill GF. Starvation in man. *N Engl J Med* 1970; 282: 668–75.
- Forbes GB, Drenick EJ. Loss of body nitrogen on fasting. *Am J Clin Nutr* 1979; 32: 1570–74.
- Waterlow JC. Metabolic adaptation to low intakes of energy and protein. *Ann Rev Nutr* 1986; 6: 495–526.
- Keys A. The biology of human starvation, 1st edn. Minnesota: Minnesota Press, 1950.
- McCance RA, Widdowson EM. Studies in undernutrition, Wuppertal 1946–49, 1st edn. London: Medical Research Council, 1951.
- Winick M. Hunger disease. New York: Wiley-Interscience, 1979.
- Waterlow JC. Protein energy malnutrition, 1st edn. London: Edward Arnold, 1992.
- Golden M. The effects of malnutrition in the metabolism of children. *Trans R Soc Trop Med Hyg* 1988; 82: 3–6.
- Golden MH, Waterlow JC, Picou D. Protein turnover, synthesis and breakdown before and after recovery from protein-energy malnutrition. *Clin Sci Mol Med* 1977; 53: 473–77.
- Reid M, Badaloo A, Forrester T, Heird WC, Jahoor F. Response of splanchnic and whole-body leucine kinetics to treatment of children with edematous protein-energy malnutrition accompanied by infection. *Am J Clin Nutr* 2002; 76: 633–40.
- Black RE, Morris SS, Bryce J. Where and why are 10 million children dying every year? *Lancet* 2003; 361: 2226–34.
- Caulfield LE, de Onis M, Black RE. Undernutrition as an underlying cause of child deaths associated with diarrhea, pneumonia, malaria, and measles. *Am J Clin Nutr* 2002; 80: 193–98.
- Rice AL, Sacco L, Hyder A, Black RE. Malnutrition as an underlying cause of childhood deaths associated with infectious diseases in developing countries. *Bull World Health Organ* 2000; 78: 1207–21.
- Pelletier DL, Frongillo EA. Changes in child survival are strongly associated with changes in malnutrition in developing countries. *J Nutr* 2003; 133: 107–19.
- The Bellagio Child Survival Study Group. The child survival series. *Lancet* 2003; 361: 1–38. 2003.
- UNICEF. State of the worlds children 2005. New York: UNICEF, 2005.
- UNICEF. UNICEF global database on child malnutrition. <http://www.childinfo.org/areas/malnutrition/wasting.php> (accessed Dec 20, 2005).
- Bhan MK, Bhandari N, Bhal R. Management of the severely malnourished child: perspective from developing countries. *BMJ* 2003; 326: 146–51.
- International Institute of Population Sciences. National family health survey (NFHS2), 1998–99. Mumbai: International Institute of Population Sciences, 2000.
- CIA. CIA World Fact Book. <http://www.cia.gov/cia/publications/factbook/index.html> (accessed Sept 10, 2006).
- Manary MJ, Ndkeha MJ, Ashorn P, Maleta K, Briend A. Home based therapy for severe malnutrition with ready-to-use food. *Arch Dis Child* 2004; 89: 557–61.
- Pelletier DL. The relationship between child anthropometry and mortality in developing countries: implications for policy, programs and future research. *J Nutr* 1994; 124 (suppl): 2047S–81S.
- Chen LC, Chowdhury A, Huffman SL. Anthropometric assessment of energy-protein malnutrition and subsequent risk of mortality among preschool children. *Am J Clin Nutr* 1980; 33: 1836–45.
- Cook R. Is hospital the place for the treatment of malnourished children? *J Trop Pediatr Environ Child Health* 1971; 17: 15–25.
- Golden MHN. Severe Malnutrition. In: Weatherall DJ, Ledington JGG, Warrell DA, eds. The Oxford textbook of medicine, 3rd edn. Oxford: Oxford University Press; 1996: 1278–96.
- Ahmed T, Ali M, Ullah MM, et al. Mortality in severely malnourished children with diarrhoea and use of a standardised management protocol. *Lancet* 1999; 353: 1919–22.
- Prudhon C, Briend A, Laurier D, Golden MH, Mary JY. Comparison of weight- and height-based indices for assessing the risk of death in severely malnourished children. *Am J Epidemiol* 1996; 144: 116–23.
- Collins S, Sadler K. The outpatient treatment of severe malnutrition during humanitarian relief programmes. *Lancet* 2002; 360: 1824–30.
- Ashworth A, Jackson A, Khanum S, Schofield C. Ten steps to recovery. *Child Health Dialogue* 1996: 10–12.
- WHO informal consultation. Informal consultation to review current literature on severe malnutrition. Geneva: WHO, 2004.
- WHO. Management of the child with a serious infection or severe malnutrition: guidelines for care at the first-referral level in developing countries. Geneva: World Health Organization; 2000.
- WHO. Improving child health—IMCI: the integrated approach. Geneva: World Health Organization, 1997.
- Chopra M, Wilkinson D. Treatment of malnutrition. *Lancet* 1995; 345: 788.
- Wilkinson D, Scrase M, Boyd N. Reduction in in-hospital mortality of children with malnutrition. *J Trop Pediatr* 1996; 42: 114–15.
- Khanum S, Ashworth A, Huttly SR. Controlled trial of three approaches to the treatment of severe malnutrition. *Lancet* 1994; 344: 1728–32.
- Puoane T, Sanders D, Chopra M, et al. Evaluating the clinical management of severely malnourished children—a study of two rural district hospitals. *S Afr Med J* 2001; 91: 137–41.
- Deen JL, Funk M, Guevara VC, et al. Implementation of WHO guidelines on management of severe malnutrition in hospitals in Africa. *Bull World Health Organ* 2003; 81: 237–43.
- Grellety Y. The management of severe malnutrition in Africa (dissertation). University of Aberdeen, 2000.
- Briend A. Management of severe malnutrition: efficacious or effective? *J Pediatr Gastroenterol Nutr* 2001; 32: 521–22.
- Waterlow JC. Intensive nursing care of kwashiorkor in Malawi. *Acta Paediatr* 2000; 89: 138–40.
- Schofield C, Ashworth A. Severe malnutrition in children: high case-fatality rates can be reduced. *Afr Health* 1997; 19: 17–18.
- Ashworth A, Schofield C. Latest developments in the treatment of severe malnutrition in children. *Nutrition* 1998; 14: 244–45.

- 50 Ashworth A. Treatment of severe malnutrition. *J Pediatr Gastroenterol Nutr* 2001; 32: 516–18.
- 51 Ashworth A, Chopra M, McCoy D, et al. WHO guidelines for management of severe malnutrition in rural South African hospitals: effect on case fatality and the influence of operational factors. *Lancet* 2004; 363: 1110–15.
- 52 Ashworth A, Sanders D, Chopra M, McCoy D, Schofield C. Improving quality of care for severe malnutrition. *Lancet* 2004; 363: 2089.
- 53 Brewster D, Manary M. Treatment of severe malnutrition. *Lancet* 1995; 345: 453.
- 54 WHO. WHO global health atlas—human resources for health 2005. <http://www.who.int/globalatlas/dataQuery> (accessed Sept 10, 2006).
- 55 Brewster D, Manary M, Graham S. Case management of kwashiorkor: an intervention project at seven nutrition rehabilitation centres in Malawi. *Eur J Clin Nutr* 1997; 51: 139–47.
- 56 World Bank. Rising to the challenges—the millennium development goals for health. Washington: World Bank, 2004.
- 57 Kessler L, Daley H, Malenga G, Graham S. The impact of the human immunodeficiency virus type 1 on the management of severe malnutrition in Malawi. *Ann Trop Paediatr* 2000; 20: 50–56.
- 58 Ticklay IM, Nathoo KJ, Siziya S, Brady JP. HIV infection in malnourished children in Harare, Zimbabwe. *East Afr Med J* 1997; 74: 217–20.
- 59 Prazuck T, Tall F, Nacro B, et al. HIV infection and severe malnutrition: a clinical and epidemiological study in Burkina Faso. *AIDS* 1993; 7: 103–08.
- 60 Mgone CS, Mhalu FS, Shao JF, et al. Prevalence of HIV-1 infection and symptomatology of AIDS in severely malnourished children in Dar Es Salaam, Tanzania. *J Acquir Immune Defic Syndr* 1991; 4: 910–13.
- 61 Amadi B, Mwiya M, Musuku J, et al. Effect of nitazoxanide on morbidity and mortality in Zambian children with cryptosporidiosis: a randomised controlled trial. *Lancet* 2002; 360: 1375–80.
- 62 Amadi B, Kelly P, Mwiya M, et al. Intestinal and systemic infection, HIV, and mortality in Zambian children with persistent diarrhea and malnutrition. *J Pediatr Gastroenterol Nutr* 2001; 32: 550–54.
- 63 Chintu C, Luo C, Bhat G, et al. Impact of the human immunodeficiency virus type-1 on common pediatric illnesses in Zambia. *J Trop Pediatr* 1995; 41: 348–53.
- 64 Ndekha MJ, Manary MJ, Ashorn P, Briand A. Home-based therapy with ready-to-use therapeutic food is of benefit to malnourished, HIV-infected Malawian children. *Acta Paediatr* 2005; 94: 222–25.
- 65 Sadre M, Donoso G. Treatment of malnutrition. *Lancet* 1969; 2: 112.
- 66 Lawless J, Lawless MM. Admission and mortality in a children's ward in an urban tropical hospital. *Lancet* 1966; 2: 1175–76.
- 67 Gueri M, Andrews N, Fox K, Jutsum P, St Hill D. A supplementary feeding programme for the management of severe and moderate malnutrition outside hospital. *J Trop Pediatr* 1985; 31: 101–08.
- 68 Brewster D. Improving quality of care for severe malnutrition. *Lancet* 2004; 363: 2088–89.
- 69 Cook R. The financial cost of malnutrition in the "Commonwealth Caribbean". *J Trop Pediatr* 1968; 14: 60–65.
- 70 Roosmalen-Wiebenga MW, Kusin JA, de With C. Nutrition rehabilitation in hospital—a waste of time and money? Evaluation of nutrition rehabilitation in a rural district hospital in southwest Tanzania: I, short-term results. *J Trop Pediatr* 1986; 32: 240–43.
- 71 Roosmalen-Wiebenga MW, Kusin JA, de With C. Nutrition rehabilitation in hospital—a waste of time and money? Evaluation of nutrition rehabilitation in a rural district hospital in South-west Tanzania: II, long-term results. *J Trop Pediatr* 1987; 33: 24–28.
- 72 Reneman L, Derwig J. Long-term prospects of malnourished children after rehabilitation at the Nutrition Rehabilitation Centre of St Mary's Hospital, Mumias, Kenya. *J Trop Pediatr* 1997; 43: 293–96.
- 73 Collins S. Changing the way we address severe malnutrition during famine. *Lancet* 2001; 358: 498–501.
- 74 Bengoa JM. Nutrition rehabilitation centres. *J Trop Pediatr* 1967; 13: 169–76.
- 75 King KW, Fougere W, Webb RE, Berggren G, Berggren WL, Hilaire A. Preventive and therapeutic benefits in relation to cost: performance over 10 years of Mothercraft Centers in Haiti. *Am J Clin Nutr* 1978; 31: 679–90.
- 76 Beghin ID, Viteri FE. Nutritional rehabilitation centres: an evaluation of their performance. *J Trop Pediatr Environ Child Health* 1973; 19: 403–16.
- 77 Beaudry-Darisme M, Latham MC. Nutrition rehabilitation centers—an evaluation of their performance. *J Trop Pediatr Environ Child Health* 1973; 19: 299–332.
- 78 Pecoul B, Soutif C, Hounkpevi M, Ducos M. Efficacy of a therapeutic feeding centre evaluated during hospitalization and a follow-up period, Tahoua, Niger, 1987–1988. *Ann Trop Paediatr* 1992; 12: 47–54.
- 79 Heikens GT, Schofield WN, Dawson S, Grantham-McGregor S. The Kingston project: I—growth of malnourished children during rehabilitation in the community, given a high energy supplement. *Eur J Clin Nutr* 1989; 43: 145–60.
- 80 Heikens GT, Schofield WN, Dawson SM, Waterlow JC. Long-stay versus short-stay hospital treatment of children suffering from severe protein-energy malnutrition. *Eur J Clin Nutr* 1994; 48: 873–82.
- 81 Ashworth A. Community-based rehabilitation of severely malnourished children: a review of successful programmes. London: London School of Hygiene and Tropical Medicine, 2001.
- 82 Ashworth A. Efficacy and effectiveness of community-based treatment of severe malnutrition. *Food Nutr Bull* 2006; 27 (suppl): S24–48.
- 83 Ahmed, T. Community-based nutritional rehabilitation without food distribution: experience from Bangladesh, in WHO, UNICEF and SCN informal consultation on community-based management of severe malnutrition in children. <http://www.who.int/child-adolescent-health/> (accessed Sept 10, 2006).
- 84 Ashworth A, Khanum S. Cost-effective treatment for severely malnourished children: what is the best approach? *Health Policy Plan* 1997; 12: 115–21.
- 85 Bredow MT, Jackson AA. Community based, effective, low cost approach to the treatment of severe malnutrition in rural Jamaica. *Arch Dis Child* 1994; 71: 297–303.
- 86 Briand A, Lacsala R, Prudhon C, Mounier B, Grellety Y, Golden MHN. Ready-to-use therapeutic food for treatment of marasmus. *Lancet* 1999; 353: 1767–68.
- 87 Briand A. Highly nutrient-dense spreads: a new approach to delivering multiple micronutrients to high-risk groups. *Br J Nutr* 2001; 85 (suppl 2): S175–79.
- 88 Briand A. Treatment of severe malnutrition with a therapeutic spread. *Field Exchange* 1997; 2: 15.
- 89 Collins S, Henry CJK. Alternative RUTF formulations. *Emergency Nutrition Network* 2004; special supplement 2: 35–37.
- 90 Fellows P. Local production of RUTF. *Emergency Nutrition Network* 2004; special supplement 2: 33–35.
- 91 Sandige H, Ndekha MJ, Briand A, Ashorn P, Manary MJ. Home-based treatment of malnourished Malawian children with locally produced or imported ready-to-use food. *J Pediatr Gastroenterol Nutr* 2004; 39: 141–46.
- 92 Diop EHI, Dossou NI, Ndour MM, Briand A, Wade S. Comparison of the efficacy of a solid ready to use food and a liquid milk-based diet for the rehabilitation of severely malnourished children: a randomized trial. *Am J Clin Nutr* 2003; 78: 302–07.
- 93 Ciliberto MA, Sandige H, Ndekha MJ, et al. Comparison of home-based therapy with ready-to-use therapeutic food with standard therapy in the treatment of malnourished Malawian children: a controlled, clinical effectiveness trial. *Am J Clin Nutr* 2005; 81: 864–70.
- 94 Collins S. Community-based therapeutic care—a new paradigm for selective feeding in nutritional crises: Humanitarian Policy Network paper 48. London: Overseas Development Institute, 2004.
- 95 Khara T, Collins S. Community-therapeutic care (CTC). *Emergency Nutrition Network* 2004; special supplement 2: 1–55.
- 96 Emergency Nutrition Network. ENN report on an inter-agency workshop. <http://www.ennonline.net/docs/CTCreport.pdf> (accessed Sept 10, 2006).
- 97 Grobler-Tanner C, Collins S. Community therapeutic care (CTC): a new approach to managing acute malnutrition in emergencies and beyond. Washington DC: Food and Nutrition Technical Assistance Project, Academy for Educational Development, 2004.
- 98 Guerrero S, Mollison S. Engaging communities in emergency response: the CTC experience in Western Darfur. In *Humanitarian Exchange*. Humanitarian Policy Network eds. London: Overseas Development Institute, 2005: 20–22.

- 99 Briend A, Dykewicz C, Graven K, Mazumder RN, Wojtyniak B, Bennis M. Usefulness of nutritional indices and classification in predicting death of malnourished children. *BMJ* 1986; 293: 373-76.
- 100 Alam N, Wojtyniak B, Rahaman MM. Anthropometric indicator and risk of death. *Am J Clin Nutr* 1989; 49: 884-88.
- 101 Briend A, Garenne M, Maire B, Fontaine O, Dieng K. Nutritional status, age and survival: the muscle mass hypothesis. *Eur J Clin Nutr* 1989; 43: 715-26.
- 102 Vella V, Tomkins A, Ndiku J, Marshal T, Cortinovis I. Anthropometry as a predictor for mortality among Ugandan children, allowing for socio-economic variables. *Eur J Clin Nutr* 1994; 48: 189-97.
- 103 WHO. Report of an informal consultation on the community-based management of severe malnutrition in children. <http://www.who.int/child-adolescent-health/publications/NUTRITION/CBSM.htm>. (accessed Sept 10, 2006).
- 104 Myatt M, Khara T, Collins S. A review of methods to detect cases of severely malnourished children in the community for their admission into community-based therapeutic care programs. *Food Nutr Bull* 2006; 27 (suppl): S7-23.
- 105 Velzeboer MI, Selwyn BJ, Sargent S, Pollitt E, Delgado H. The use of arm circumference in simplified screening for acute malnutrition by minimally trained health workers. *J Trop Pediatr* 1983; 29: 159-66.
- 106 Berkley J, Mwangi I, Griffiths K, et al. Assessment of severe malnutrition among hospitalized children in rural Kenya: comparison of weight for height and mid upper arm circumference. *JAMA* 2005; 294: 591-97.
- 107 Pelletier DL, Frongillo EA Jr, Schroeder DG, Habicht JP. The effects of malnutrition on child mortality in developing countries. *Bull World Health Organ* 1995; 73: 443-48.
- 108 Bairagi R. On validity of some anthropometric indicators as predictors of mortality. *Am J Clin Nutr* 1981; 34: 2592-94.
- 109 Collins S, Yates R. The need to update the classification of acute malnutrition. *Lancet* 2003; 362: 249.
- 110 Myatt M, Feleke T, Sadler K, Collins S. A field trial of a survey method for estimating the coverage of selective feeding programs. *Bull World Health Organ* 2005; 83: 20-26.
- 111 Van Damme W. Medical assistance to self-settled refugees. Guinea 1990-1996. Antwerp: ITG Press, 1998.
- 112 Jha P, Bangoura O, Ranson K. The cost-effectiveness of forty health interventions in Guinea. *Health Policy Plan* 1998; 13: 249-62.
- 113 Tectonidis M. Crisis in Niger—outpatient care for severe acute malnutrition. *N Engl J Med* 2006; 354: 224-27.
- 114 Guerrero S, Bahwere P, Sadler K, Collins S. Integrating CTC and HIV/AIDS Support in Malawi. *Field Exchange* 2005; 25: 8-10.
- 115 Collins S, Sadler K, Dent N, et al. Key issues in the success of community-based management of severe malnutrition. *Food Nutr Bull* 2006; 27: S49-82.
- 116 World Bank. World development report 1993, investing in health. Oxford: Oxford University Press, 1993.
- 117 Hamer C, Kvatum K, Jeffries D, Allen S. Detection of severe protein-energy malnutrition by nurses in The Gambia. *Arch Dis Child* 2004; 89: 181-84.

A Protocol for preventing Starvation

The objective of this proposal is to establish processes of investigating starvation that are transparent, reliable and respectful of the dignity of the survivors; and mandatory protocols for intervention for relief, prevention and accountability.

Definition of Starvation

It is remarkable that Famine Codes of the past, and contemporary Codes, do not contain an agreed definition of starvation. It is important to begin by defining starvation carefully and rigorously, and yet in ways that are accessible to the lay public.

Hunger may be understood as the denial of adequate food to ensure active and healthy life. If hunger is prolonged to an extent that it threatens survival, or renders the person amenable to succumb because of prolonged food denials to curable ailments, then the person is living with starvation. If these conditions actually lead to death, then this is a starvation death, even though the proximate cause in every case would be a medical failure. But the cause of death is not the medical failure, but the prolonged denial of nutrition that led to a person succumbing to medical conditions which a well fed healthy person would easily be able to combat and survive.

This definitions of starvation and modes of verification in this chapter and its annexures, are derived very substantially from an excellent document 'Guidelines for Investigating Suspected Starvation Deaths', prepared by the Jan Swasthya Abhiyan) Hunger Watch Group, based on a consultation organized in Mumbai in 2003¹.

The document points out firstly that 'starvation is ultimately not primarily a technical

¹ This conference was attended by and attended by Veena Shatrughna (Deputy Director, National Institute of Nutrition, Hyderabad), Vandana Prasad (Paediatrician), Narendra Gupta (Prayas), Sunita Abraham (Christian Medical Association of India), Sarojini (SAMA and Convenor of MFC), C. S. Kapse (Professor, Department of Forensic Medicine, D. Y. Patil Medical College), Neeraj Hatekar (Professor, Department of Forensic Medicine, University of Mumbai), Sanjay Kode (Ph. D. student, Department of Economics, University of Mumbai), Abhay Shukla (Co-ordinator, SATHI Cell, CEHAT), Neelangi Nanal, Amita Pitre and Qudsiya (all researchers at CEHAT).

issue, but is rather related to deep-rooted socio-economic inequities, which require radical and systemic solutions'. It adds that 'while approaching the issue of hunger related deaths, we should start with the basic fact that starvation and malnutrition related deaths are *public health problems requiring community diagnosis*. In this sense they differ from classical "disease related mortality". The diagnosis of a death due to tuberculosis may be approached as an individual diagnosis. But *the diagnosis of a "malnutrition death" cannot be just an individual diagnosis*; we have to document the circumstances prevailing in the family and community along with the individual to reach such a conclusion'.

It adds that the dilemma is deepened because 'generally prevalent "baseline" malnutrition, gradually worsening severe malnutrition and definite starvation merge with each other along a seamless continuum. In a community which is used to barely subsistence intake, three years of drought reduces this further and then some families start eating once a day, a few poorest families eat on alternate days ... where exactly is the dividing line between malnutrition and starvation? When exactly does the situation change from "a chronic problem" to "an alarming situation"?'

Public officials, the lay public and sometimes even professionals believe that starvation requires no intake of food. This underlies some of the denials when post mortems of the corpses of the deceased show some grains of food, or investigators are able to find some foodgrains in the homes of the person who recently died, and the cause of whose death is being contested. The Hunger Watch group defines starvation as levels of food intake that are unsustainable for the continuance of life itself. In assessing this, one challenge, as already observed, is that 'malnutrition, starvation and starvation deaths seem to lie along a continuum. How is it possible to demarcate one from the other?'

An adult who eats 850 kilocalories of food daily or less may be presumed to be starving. This cut-off is based on research that shows that a person who weighs 50 kilograms, if she or he engage in no physical activity altogether, they require at least 850 kilocalories merely to stay alive, even though they perform no work at all. Thus if it is established that the adult had access to less than 850 kilocalories, then this is not compatible with life itself, and the person is undoubtedly starving².

² In the word of the hunger watch group (mimeo, 2003), 'Based on a requirement of 0.7 Kcal / kg / hour, a 50 Kg person needs about 850 Kcal per day to maintain oneself at Basal Metabolic Rate, without any physical activity'. Thus any food intake that is sustainedly lower than 850 Kcal per day would be incompatible with life in due course and is an indication of starvation'.

Another reliable physiological indication of starvation is a BMI (Body Mass Index) of 16 and less. Body Mass Index or the BMI is the ratio of the weight of the adult in kilograms to the square of her height in metres. This is a very good indicator of adult nutritional status as it is age independent. Values of BMI that fall between 20 and 25 are deemed to be normal. On the other hand, significant research finding is that in adults, if BMI is below 19, mortality rates start rising. Mortality rates among adults with BMI below 16 are nearly triple compared to rates for normal adults³. Thus in adults a BMI of 16 and less should be used as a cut off point to demarcate starvation from under-nutrition.

The nutritional status of children is easy to derive from the child's weight and age, and most ICS workers are trained in assessing this. NCHS standards for ideal body weights for children, both male and female are available. Classification systems based on these standards enable us to decide from the age of the child and its weight if the child has a normal nutritional status or is either undernourished or overweight. The weight of the child should be compared to the ideal weight for that age mentioned in the NCHS standards. A percentage of up to 80 per cent is deemed normal, 60 to 80 percent is deemed mild to moderately malnourished, and below 60 per cent the situation is severe, below 50 per cent alarming.

Verifying Starvation

The duty to investigate and verify complaints of starvation must be shared by public officials, elected representatives, affected people and local communities, and professionals. Each must have clear and well defined roles.

In practice, if large numbers of people die of starvation, it occasionally captures media attention, and there is transient public outrage. Government officials in every part of the country, hotly deny allegations of starvation deaths. Most claim that the deaths result from illness, some even quibble that people were just chronically malnourished, but not starving. Issues of food security and hunger surface briefly in public consciousness, whenever there are media reports on starvation deaths. The brief public outrage that follows such reports lead almost invariably to unseemly wrangles about whether this was indeed a starvation death, with angry denials by officials, post mortems and other evidence being mustered to establish that there was indeed some

³ 'Guidelines for Investigating Suspected Starvation Deaths', by the Jan Swasthya Abhiyan) Hunger Watch Group (mimeo, 2003)

grain in the stomach of the diseased or available to the family and therefore this does not constitute a starvation death.

Apart from this, even the media and political establishment tend to react only when reports emerge of actual starvation deaths surface; reports of destitution that led to this final collapse fail to stir interest or action. There is in this sense, in both State and non-State circles a certain 'normalisation' of destitution, of conditions in which people are forced to live with starvation. They can expect the State to act or public opinion to be outraged only when people begin to die.

Few people die directly and exclusively of starvation. They live with severe food deficits for long periods, and tend to succumb to diseases that they would have survived if they were well nourished. Official agencies do not recognize these as conditions of starvation, and instead maintain that the deaths were caused by the proximate precipitating factor of infection. We have also seen that starvation does not require absolutely zero food intake, but rather prolonged periods of such low food intake as to be incompatible with survival.

In the aftermath of media complaints of starvation deaths, while analysing deaths due to starvation, the official investigator usually conducts a conventional enquiry in which he or she fires a series of humiliating questions soon after the death has taken place to the victim's. This would only leave scars on the family of the deceased. The usual line of questioning is about whether the individual or family had access to any food at all in the period immediately preceding the death, or whether the death was due to illness or natural causes. There are sometimes post mortems to show even a few grains or wild leaves and tubers on the stomach, to demonstrate spuriously that the death was not due to starvation.

Investigating the Living by Public Officials

The National Human Right Commission in its investigation into alleged starvation deaths in Orissa⁴ some important and human principals have been established. First of these is that death is not necessary as evidence of starvation. In the words of Mr. Chaman Lal, former Special Rapporteur of The National Human Rights Commission

⁴ 'Feedback from Dr. Amrita Rangaswamy on Starvation deaths', Tanushree Sood, CES, Mimeo, 2005.

(NHRC)⁵, 'A person does not have to die to prove that he is starving. This insistence on death as a proof of starvation should be given up. Continuance of a distress situation is enough proof that a person is starving'. We agree that medical post mortem inquiries do not serve much in the process of preventing starvation deaths and in assuring the right to food. Indeed, it hurts and humiliates those families and communities who have lost people painfully to starvation. Citizens, especially the ones who are starving, have a right to dignity. Starvation is also rarely an isolated instance, but reflects instead prolonged denials of adequate nutrition to households, communities, or social categories. Such people are usually very impoverished and dispossessed or destitute.

The discourse around starvation, especially among public officials and the media, should shift in such times from not just those who died, but those who survived but are deeply threatened. They need to recognise starvation to be a condition not just of the dead but also of the living. It is crucial to understand and accept that death or mortality is not a pre-condition for proving the condition of starvation. Long-term unaddressed malnutrition and endemic prolonged phases of hunger must be recognised as situations of starvation, and the duty of the state to prevent deaths of persons who are living with starvation.

There are many ways that allegations, complaints and fears of starvation arise. In any such situation, the focus of the investigations by public officials must focus not on the dead, but on the living survivors, and people of the family, class or community who may be similarly threatened. This would ensure that the survivors of the deceased are not traumatised further, and measures for relief and prevention are put in place without delay.

But it is important also to establish the veracity of complaints of starvation deaths. This should be done by processes of community investigations and verbal autopsies by public health officials in collaboration with local people. Both these processes may proceed side by side.

In the event of complaints, through application or verbal, made in the media, by affected people or activists or any other source, local panchayat representatives and revenue official must inform the District Panchayat head and the District Collector

⁵ Personal communication

immediately, who in turn will inform each other, the local officials, and panchayat functionaries at various levels. They would be debarred from issuing denials, in the absence of investigation by public health functionaries, and instead the effort should be to identify the sources of distress, and respond to mitigating and ending these.

It would be the duty of the District Panchayat head, with the District Collector, the Chief Medical Officer, heads of departments of civil supplies, women and child welfare, social welfare and forests, to personally visit the location expeditiously, and in any case not later than 48 hours after receiving the complaint or information is received. They should investigate the overall field situation in the family and community: not whether there was a starvation death, but whether the specific family, as well as in that location the local community (such as Musahars) and the social (such as single women) and class (such as landless workers) categories to which she or he belongs, subsist in conditions of prolonged deprivation of adequate food with dignity, or in continuous uncertainty about the availability of food, or dependence on charity or debt bondage for food. On receiving reports of people living or dying of starvation, may be analysed, by a process described sometimes as verbal autopsy. They should meet the family of the victim, and learn from them about their general food and livelihood situation, and with the neighbourhood, and the local community, tribe, caste, class, gender or age group to which the affected people belong, and the village (or urban settlement) at large.

This public investigation should be conducted in consultation with and seeking the support of the affected people. It may occur in two phases. In phase one, discussions are held with the family of the victim and some neighbourhood families. During these discussions, the victims' families may be asked questions about the food and livelihood conditions and deprivations of the individual and the household, access to food and work, periods of hunger, and so on. The idea is not only to probe death and its causes but only to understand the poverty and destitution faced by the families and by similarly affected people. Attempt should also be made to understand the root cause of poverty such as livelihood crisis, heavy debt, crop failures etc.

In the second phase of investigation, discussions should be carried forward with the other members of the tribe, caste, class, gender or age group to which the affected people belong. During these discussions, questions may be posed about the food and livelihood conditions and deprivations of the class and communities of deprived people, their access to food and work, and periods of hunger. Broader questions

regarding functioning of the food and livelihood schemes may be asked, such as (i) is there an operational anganwadi centre running in the village, (ii) is the nearby government school providing midday meals to the children, (iii) does the ration shop provide foodgrains in the right quantity, price and on time, (iv) how many elderly persons in the village obtain social security benefits or pensions from the state and so on. At the same time, the people should be provided enough space to reveal situations on their own. They should not be crowded out by questions from the investigator. It may also be worth asking if any change has occurred in their way of living over the years. In other words, have the government policies brought about a change in the way of living of the people? There is a need to document the circumstances prevailing in the family and community at large special focus needs to be laid on tribal and backward rural areas. Also there may be cases of starvation of individuals who for one reason or another are without families, or abandoned by their families and excluded from their communities. The investigations should be sensitive to these as well.

These findings should be recorded by the District Panchayat head and District Collector in writing, and their report shared and explained in the local language to affected people and communities, local elected leaders and local officials. The report should contain a clear time bound action plan for intervention.

State Interventions in Situations of Suspected Starvation:

Even without awaiting the outcomes of the community investigations to establish starvation deaths, public authorities of the Panchayat and district administration must implement a range immediate measures, as soon as they are convinced that conditions of grave and threatened food and scarcity prevail in a local area of community, which result in people being forced to live in conditions of prolonged under-nutrition and even starvation.

Once it is established that there exist conditions of people of a dispossessed community, class or social category who live with starvation or grave threats to their food and livelihoods security, it is the duty of the State (jointly of the District Panchayat and district administration led by the District Collector) first to provide relief in case of conditions of starvation or long term unaddressed under-nutrition and failure of food schemes to prevent or remedy this. In its current form, 'gratuitous relief' is in the nature of charity. Such an ideology cannot bring about long term and

permanent change in the condition of people who are vulnerable to starvation or the system of administration. Thus, such kind of an ideology needs to be converted into a system of entitlements. In other words, relief needs to be in the form of entitlements and not charity.

If a certain region has been diagnosed as suffering from intense hunger, the state should be alarmed immediately, and be asked to place systems of relief, immediate, short term and the long term.

1. Relief for Family of Deceased: The first immediate relief must be for the affected family itself that has suffered the loss of persons for reasons associated with prolonged deprivation of adequate and assured food with dignity. Some of the measures that may be relevant include:

- a) ensuring immediate food availability to the family, free of cost for at least for a period of six months and then continuously on a more permanent basis at highly subsidised rates. This would be by the distribution to them of special AAY cards with the specific provision that they would get their food entitlement without any cost for the initial six months;
 - b) ensuring early sanction and release of insurance under NFBS, and release of an ad hoc amount of the same amount for all dead as compensation regardless of whether or not they were adult bread earners;
 - c) identifying in consultation with the survivors in the family, the reasons for livelihoods denial, collapse or insecurities and assisting them to build a secure livelihood through measures like land allotment and restoration in case of alienation;
 - d) ensuring their coverage of all food and livelihood schemes for which they are eligible such as ICDS, MDM, NREGA and old age, widows and disability pensions;
 - e) for children, ensuring their admission to SC ST hostels if they choose, so that their education, food and protection is secured;
 - e) organising psycho-social support through professional and trained lay counsellors to the survivors of the deceased;
- and (f) for infants, small children, expectant and nursing mothers, doubling their quota of food entitlements, hospitalisation where necessary, arrangements for nutrition rehabilitation, and health-care including immunization.

2. Relief for others identified to be similarly threatened: The next stage of intervention would be for the community, class or social category to which the family of the affected person belongs. This must begin with publicising and opening NREGA works for all those who seek it, within a week of the receipt of the information. The ceiling on 100 days for one member of each family must be relaxed for the affected people for a period of 2 years from the time a situation of starvation is identified. Simultaneously the mid day meal in the school will be extended to all days in the year, and open to all children, even if out of school, and old and disabled people and single women who seek it. The ICDS centre will also provide children of 3 to 6 years hot cooked meals twice a day instead of once, and this will be open also to pregnant and lactating mothers, and single women.

This must be followed with a careful official as well as well publicised affected people's social audit of why they could not access their food rights from the food and livelihood schemes relevant for them. For instance, were their small enrolled and regularly availing of the services of ICDS, and was their decline of nutritional status identified and addressed on time; if not, why not? Were the older children in school, and did they access regular and nutritious mid-day meals? Did they have ration cards, AAY or at least BPL, and did they regular receive the prescribed quota of 35 kilograms of subsidised food grains from the ration shop; if no, again why not? Did all old people receive pensions, and were these distributed at their doorstep on time every month? The same questions would apply to widows and disabled people in states with schemes for pensions for these groups. Did they seek job cards and work, and was this given to them in accordance with their legal entitlements under the NREGA?

From such an enquiry, the reasons for failures of food and livelihood schemes, and the exclusion of these most food vulnerable people from their reach, should be clearly diagnosed. The District Panchayat and Collector should clearly fix responsibility at all levels, punish those found guilty, remedy gaps of funds, resources and personnel, and address issues of discrimination and social exclusion. There should then be a time-bound coverage of all affected and threatened people by AAY ration cards, job cards under NREGA, old age, widow and disability pensions, and ICDS services, including nutritional rehabilitation and hospitalisation where found necessary, within a period of one month from the date of initial information. Failures to do so, if they result in further loss of life or deterioration in people's nutritional condition, will be the personal responsibility of the district leaders of the Panchayat and administration.

In the long run, local structural sources of pauperisation will be identified and local solutions developed in consultation with the gram sabha and village panchayat. These may include failures to implement land reforms, tribal land alienation, caste discrimination, micro minor irrigation and watershed development, availability of formal credit for agriculture and artisans, access to forests and choices of agricultural technology and cropping patterns.

Feudal Politics Of Starvation & Malnutrition

Report from Rewa

Prepared by

**Samaj Chetna Adhikar Manch, MPLSSM and Right to Food Campaign
Madhya Pradesh Support Group**



*Meet the Kol Adivasis
Who have a history soaked in thirst
And geography parched with hunger
The crumbs left in our cooking pots
Is more precious to us than our spouse
The little water in the pond
Is what we cling to for survival
In eyes blurred with woes
Swim burning questions
Of government aid
That has drawn a blank.
This is our plight!*

Gayaprasad Gopal

An introduction to Kol Advivasi

Madhya Pradesh holds 1st rank among all the States/UTs in terms of ST population and 12th rank in respect of the proportion of ST population to total population¹. 'Kol' is one of major tribe of Madhya Pradesh. They are among the most excluded tribal communities in Madhya Pradesh.

The word "Kol" appears to have been derived from the Mundari word ko , meaning "they," or from horo, hara, har, ho, or koro —"the men"—by which the Kols identify themselves. The Kol lent their name to the language group formerly known as the Kolarian, and now better known as the Mundari or Austroasiatic Language Family. The Kols are mentioned as a generic category of people in eastern India in medieval texts. In the imperial period, the word "Kol" acquired a pejorative meaning as it became a synonym for the savage, the lowly, those performing menial jobs, the militant, and the aggressive².

Location³-- A great tribe of Chota Nagpur, which has given its name to the Kolarian family of tribes & language. They are distributed all over Chota Nagpur, whence they are migrated to central India. The tribe that today bears the name Kol is restricted to a part of Madhya Pradesh and Uttar Pradesh. Earlier the

¹ Census of India 2001

² Encyclopedia of World Cultures, Volume 3 - South Asia by K. Singh

³ The tribes & caste of the central provinces of India, Vol. III by R.V. Russell & Heera Lal

Kols were described as one of the most widely spread. But now they are identified with the Kol tribe only, distributed in twenty-three districts of Madhya Pradesh and nine adjoining districts of Uttar Pradesh.

Language and Culture-- The Kol no longer use their ancient language and have adopted Hindi and the Devanagari script. Kol family is Patriarchal. The word Munda is the common term employed by the kols for the headman of the village.

Monogamy is the rule but polygamy also occurs. As there is an adverse sex ratio with the Kol females outnumbering males. The over all sex ratio of the Kol in Madhya Pradesh is 948 females per 1000 males which is lower than the national average of 978 for all STs⁴. The sex ratio in the age group 0-6 years of 969 is lower than that of all STs at the national level (973). The Kols pay a bride-price (chari), which consists of small cash, a calf or a goat, and such ornaments as a bangle (kangan), toe ornament (lacha), etc. In recent years chari has given place to dowry (dahej), which comprises of cash and utensils.

Literacy & Educational Level-- The overall literacy rate is lower among the kol in comparison to Gond & Korku tribe of Madhya Pradesh. Kol having overall literacy rate of 35.9 only whereas it is just 22.9 in case of females. Even among Kol literates, 7.2 per cent are either without any educational level or 47.1% have attained education below primary level. Literates, who are educated up to metric/secondary/higher secondary, constitute 6.6 per cent only. Graduates and above are 0.6 per cent while non-technical & technical diploma holders constitute a negligible proportion (zero).

Livelihood and Subsistence -- They work more often as daily wage laborers, collectors of forest produce, and gatherers of wood fuel. A few Kols own land, but most are landless. Kol tribe is mostly agricultural laborers with 70.4% involved in it for their livelihood, while 12% constitutes cultivators. Other works accounts for 16.6%.

Life of Kol in Rewa District

Though India is progressing fast to attain pinnacle at different levels and get transformed into developed nation from a developing country. But nothing has changed for the 'kol' adivasis, both historically and geographically. In fact, time has stood still for the 'Kol' adivasis. They are not only trapped by caste based feudalism but they are now forced to bear feudalistic attitude of official of forest department. As a result, conditions has deteriorated more sharply due to

⁴ Census of India 2001

negligence of the government towards ensuring the basic rights of the most vulnerable tribal group.

Rewa District lies in the eastern part of Madhya Pradesh. Java is amongst the nine block of Rewa. Total number of Villages covered under the java block is 244 having 87 gram panchayats. The total population of Java according to Population census 2001 is 1, 43,662 & 16.64% are SC population & 18.65% population belongs to ST.

Though the Java block is dominated by dalit & tribal population but still they are worst suffers in the block. Feudalistic pressures has barricaded all the door to progress for kol adivasi & even put a question mark on the existence of kol adivasi. They are made to strive for starvation & malnutrition.

Tyranny of Malnutrition

One year old Meena D/o Sukhchain Adivasi has taken his last breath in Nov'09. He was severely malnourished with grade-IV malnutrition. She was taken to NRC at Sirmour in Sep '09 but official of NRC sent her back avowing that no beds vacant to admit her. After that on 30 Sep '09 the activists of Samaj Chetna Adhikar Manch admitted her in Java NRC. Meena was discharged from NRC on 14th day without any sign of improvement. She was still in grade-IV during the discharge. As a result the family lost of their twinkling star Meena within 15 days of discharge.

Meena's sister Himanshi, 20 months is also struggling the battle of life with grade-III malnutrition. She was also refused to get admission in NRC. Himanshi is being taken care only by her mother as her father has migrated to earn livelihood. The family is surviving in very odd circumstances & can't afford for private treatment of their malnourished child. Sukhchain of Village Kuthila has a family of 6 members and depends mainly on wage earning and resort to distress migration almost through out the year to Uttar Pradesh where they work as laborers under private contractors. Though they have job cards under NREGA but had got public employment only for 20 days & its payment is still pending one year. The food insecurity of the family has aggravated as they do not have a ration card.

Two little sisters Himanshi & Meena were not the only child to be clutched by malnutrition in the area.

That child's eyes were almost closing; he was not even able to see properly. The possibility of his standing up is distant. He is a resident of Ramgadhwa village which is adjacent to Atraila, another small village. There are 22 more children



like Deepak in this village who are reeling under malnutrition. As such, the 'anganwadi' building of Atraila is quite magnificent but these children have no access to it. It is unfortunate for these children that they neither get anything from the anganwadi center nor are their names registered under the category of children affected by malnutrition. The center is near their homes but they have no access there.

When the weight of only 23 children from Ramgadhwa village of Java Block in Rewa district was taken, not even a single child was found to be of normal weight. All of them were found to be suffering from malnutrition, whereas the anganwadi workers who belong to higher caste claim that not even a single child is suffering from malnutrition. Actually Rewa district has always been a fortress of feudalism and caste distinctions have always kept the deprived classes at a distance. The same happened here. And till these children are not considered as suffering from malnutrition the probability of their treatment will remain remote.

Large numbers of children (0-6 years) are in grip of malnutrition in Java block of Rewa district in Madhya Pradesh. Birsa Munda Bhu Adhikar Manch (Birsa Munda Forum for Land Rights) Rewa, Samaj Chetna Adhikar Manch and Right to Food Campaign Madhya Pradesh Support Group surveyed village Kalyanpur, Ramgadhwa & Kuthila of Java block in Oct'09 to trace out the state of child health in the block & related socio economic circumstances that are leading to degradation high level malnutrition in the block.

During the survey it was found that children & mothers are not getting the benefits of the services of the Anganwadi centers & are discriminated on the grounds of caste & creed. Children are malnourished but not getting admissions in NRC due to lack of sufficient facilities to provide medical care to large number of malnourished children. Underprivileged villagers in Java block are mostly dalit & tribal. Their life is full of scarcity. The standard of living is very pity as they do not get work under NREGA or even if they got it for 10-20 days, their payment are still pending for more than one year. They are not supplied with sufficient ration of their ration cards. They are forced to migrate to distant areas in hunt of their livelihood. After the survey they referred 30 severely malnourished to NRC at Java on 30th Oct'09. But out of them only 10 children of grade IV were admitted & rest are sent back to wait for their turn.

Recently on last week of Nov'09 seven more children were traced as malnourished with two children in grade -IV, four children in grade-III and two children in grade-II of malnutrition from Kalyanpur, Ramnagar and Ramgadhwa village of Java block. This evidently illustrates the apathetic attitude of the administration towards child health care & its accountability to ensure food security for its people.

83 Percent Children Malnourished

The gravity of the situation arising due to malnutrition in this area can be gauged from the fact that in eight villages 83 % children are suffering from malnutrition. Out of these, 9% children are suffering from severe malnutrition. In the villages of Mohaniya and Ramgadhwa of Jawa development block the situation is very serious. If we are to believe the 12th round of the Bal Sanjeevani campaign then the percentage of malnutrition is 48 in Rewa district when the serious cases of malnutrition are 54. In fact these 8 villages tell a different story which appears very grave.

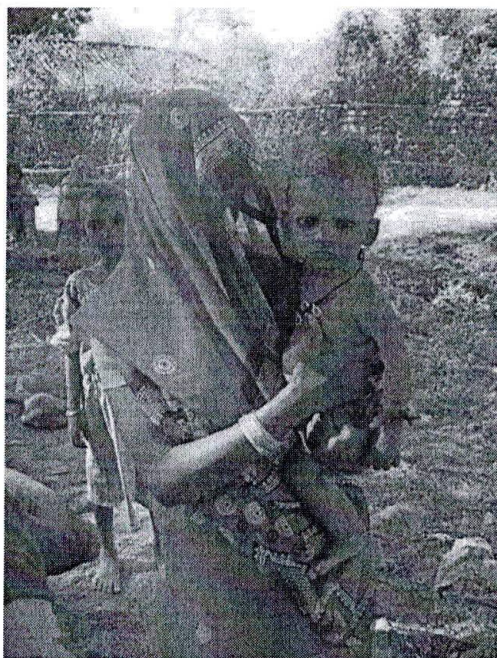
Name of the village	Total no.of children who were weighed	Mal. Grade 1	Mal. Grade 2	Mal. Grade 3	Mal. Grade 4	Normal
Ramgadhwa	23	10	4	8	1	0
Kuraily (Koni)	9	3	2	1	0	3
Mohaniya	5	1	2	0	2	0
Kalyanpur	7	0	1	4	2	0
Ram nagar	13	2	8	2	1	0
Kuthila	4	0	2	1	1	0
Harijanpur	10	0	0	0	0	10
Khaptiha	02	0	2	0	0	0
Total	73	16	21	16	7	13
Percent-age	100	21.9	28.9	21.9	9.58	17.00
Reference : Analysis of the weights(Malnutrition Status) taken by independent groups in each village in the presence of the community between 25th -30th September '09.						

When the district officer in charge of the Woman & Child Welfare Dept. was asked for information regarding malnutrition cases , he replied that he is not authorized to talk to the media regarding the data. Only the collector will talk about malnutrition. So what should be inferred by this? The question here is, why will only the collector talk about this data ? Due to this ambiguous situation a

clear picture regarding malnutrition is not visible. Due to the effect of feudalism they are kept at a distance from their rights.

Sketching the life in Kalyanpur Village

A schedule caste girl Priyanka d/o Sanat kumar was in the grade-IV of malnourishment when she was taken to Nutrition Rehabilitation Centre (NRC) at Java in Rewa district. But she was refused to get admission in NRC & she was not even referred to any other health institution in-spite of such a degrading health condition. The socio economic condition of the family is very pity. Though they are having Ration card but ration is distributed on the fixed day of the month. Therefore many a times it gets lapse due to lack of money on that particular date. They are also supplied with the job cards but unfortunately there are no jobs under NREGA since last three months.



They family is unable to have a balance & nutritious diet. Children do not get milk, egg, butter, ghee or any other protein enriched diet. Children, pregnant & lactating mothers do not get any benefits of Aanganwadi center (AWC). Growth monitoring of children is done only twice a year.

Motilal S/o Jayprakash is 18 months old but just having weight of 7 kgs only. He was referred to NRC & stayed their for 14 days. At NRC his health was recovered by 50%. Motilal thereby shifted from grade-IV to grade-II of malnourishment. But still he continued in grade II with no further improvement. Jayprakash do not got any work on his job card from last three months. They get ration under the BPL ration card but in lack of employment Motilal's father is forced to take loan on high rate of interest. Sometimes they are forced to take Chapatti with salt & chili only. Do not get any services of AWC.

Sushma D/o Pappu Basor is fourth grade malnourished child. Pappu along with his whole family was forced to migrate mostly through out the year in search of livelihood. They are unable to carry out their tradition work in lack of Bamboo wood. They migrate to Kanpur & worked as rag-pickers. They have not received a single day work on their job card. It is difficult for them to manage at least two

meals a day. In such a nasty circumstances, they are unable to admit their child to NRC for 14 days.

Although Aaganwadi center is functional in village Kalyanpur but women & children are deprived of benefits of its services due to existence of persistent caste discrimination. The aaganwadi worker (AWW) is a Brahmin women & follows discriminatory practices with the children & other beneficiaries of Dalit & Schedule tribes. They cannot even think & talk for their rights.

Status of Child Survival in Ramgadhwa & Kuthila

Deepak S/o Ramnarayan Kol (of Schedule tribe) was in grade-IV of malnutrition, when he was repudiated to be admitted in NRC. The socio economic status of family is very poor. They got work only for 12 days in one whole year on his job card. As they do not get work in their village or nearby they are forced to migrate to other area that leads to malnutrition among women & children. Due to migration children are easily entrapped by seasonal disease. And malnutrition along with seasonal diseases escorts the vulnerable children to more serious health condition.

A one month baby Jyoti D/o Ram Prasad Kol is merely of 2 kgs. The economic status of the family is extremely disappointing. They are neither having Ration Card nor having Job Card.

24 months old, Uma D/o Ram Bhajan Kol of Schedule tribe is in third grade of malnutrition. Similarly, Rashmi D/o Munna Lal -36 month, Sangita D/o Shivvachan- 24 months & Archana D/o Ram Saroj - 12 month old are also in grade III of malnutrition.

All the children mentioned above keeps on moving between grade III & IV of malnutrition. The overall livelihood scenario of dalit & tribal in the village is very awful. They buy ration under PDS whenever informed for supply. They are forced to migrate to Shankargarh, Allahabad in Uttar Pradesh as there are no jobs for them under NREGA. Under NREGA, most of them got work only for 10 to 12 days maximum in one year's time. Their are some villagers who got work only for a single day. Even for these 10-12 work they are not paid with full wages but are given only half of their wages after evaluation of their work by Panchayat Secretary.

When villagers demanded work on their job cards, they are not given receipt against their application. But they verbally informed by Panchayat Secretary that there is no work for large number of people and as per the work requirement some

people are already supplied with work. Now they should contact whenever some new work will be started.

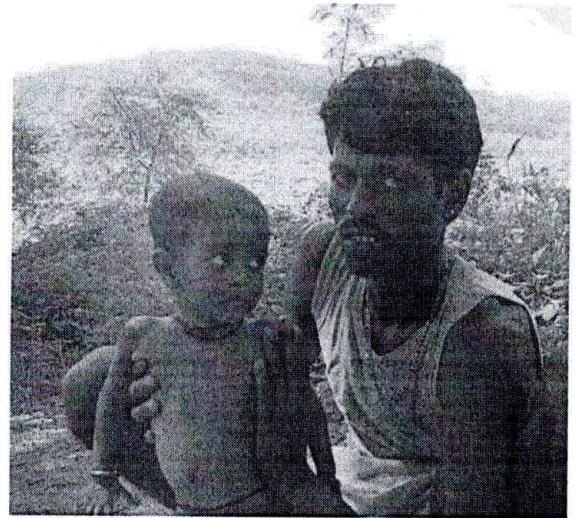
Aaganwadi center is run by aaganwadi helper. AWW belongs to upper caste, so she seldom comes to AWC. AWW & her helper do not go for home visits to monitor women & child health progress & informed them regarding the services of the center. Not many children come to AWC in such circumstances.

Ashish S/o Ramai Adivasi, 12 months from Village Kuthila was severely malnourished with total weight of merely 5.3 kgs. Due to malnutrition he turned very weak in spite blightful poverty, family is not even provided with ration card nor do they got a single day work on their job cards. So they migrate even for a year to Uttar Pradesh for most of the time.

The Aaganwadi Center in Kuthila village is being run by the helper as AWW do not approach to AWC being women from upper caste. The Health department officials & staff never visit the village to provide any sort of health services. In lack of proper medical & nutrition care, many children are malnourished in the village. People here survive in very difficult state of affairs & are using fuel woods in dark to prepare their food. But they are not provided with any support services by the government.

Nutrition Rehabilitation Center (NRC)

We are all aware that children who are suffering from severe malnutrition need to be admitted to the NRC for 14 days where they are treated completely and re examined 4 times, thereafter. But when these children are sent to the NRC they are sent back and advised to wait for their turn.



The same thing happened with Amar, seen in the picture alongside. One year Amar belongs to Ramnagar village and when his father Raghuvansh took him to the NRC for getting him admitting in Java a month back, he was sent back twice. He was also advised to wait for his turn. It should be known that 6 children are suffering from malnutrition in Ramnagar.

Ever since January 2008 when the NRC was started in the Community Health Center at Java it has had a capacity of only 10 beds. This means that only 10 children can be admitted there at one time. Other than this not a single additional

child can be admitted even though he may be suffering from severe malnutrition and may even lose his life. Does that mean that the children will be admitted only when the authorities want.

Wrong Figures Are Produced By The WCD Department

There is neither a pediatrician nor an A.N.M. for this NRC, due to which a lot of difficulty is faced in the management. Shri M K Pande, (Block Medical Officer) acknowledges that he is unable to admit more children due to shortage of capacity although malnutrition is widespread in the area. The Women and Child Development department is trying to hide the real picture by producing erroneous figures. The figures produced by them after the survey are incorrect. In actual fact the situation is much worse. They also say that the children brought to the NRC are not examined on time. Even if the children have come once it is not clear as to what happens to them in future.

Left to Die

On the 30 of September '09 36 children from 22 villages were brought for being admitted to the NRC at Java village but only 10 were admitted and the remaining 26 were sent back. Now these children could live or die! The government did not take any responsibility for this. In simple terms these children were left to die. The administration did not even consider referring them elsewhere.

15,000 Children Died In Last Three Years

According to the figure based on the infant mortality rate (72/1000) on an average 1.25 lakh children die in the state per year. In Rewa district, according to the infant mortality rate, on an average 4000 children die every year. If we are to believe the figures, 15,000 children have died in the last three years. Just in this year 1869 children have succumbed to death between April and September.

Year	Infant deaths (as per state Government data)	Actual deaths (according to the Mortality rate)	Difference
2006-07	1324	4386	3062
2007-08	972	4833	3861
2008-09	702	3928	3226
Sept 2009	503	1869	1366
Total	2998	15016	12018
Reference: M.P. Government Health Department			

Two types of conflicting figures are seen in the table. According to the registration carried out by the government 3000 children have died in three years but 15,000 children have died in Rewa district according to the death rate even though they were not registered. It means that the government did not exhibit these figure of 12,000 deaths on the website thus giving false figures. These are figures for infants only, but if we consider figures for children upto 5 years this crosses 20,000.

Sorry State Of Affairs In The State

The figures of the third round of the National Family Health Survey reveal that in Madhya Pradesh 60 % children are suffering from malnutrition which is much

scarier than the national average of 42.5 %. Out of these children also 13 % are affected by extreme malnutrition. According to the sample registration carried out by the Family & Health Welfare Dept. of the Government of India, in Madhya Pradesh 72 children below 1 year of age die for every 1000 children born live, which is the highest in the country. This means that in the state 1 lakh and 33 thousand infants die every year. 82 % children of the state are in the grip of anemia, that is, lack of blood. In spite of this only 186 NRCs are being run in the state, which is highly insufficient.

No serious efforts are being made to combat malnutrition in the state, wherever children die due to malnutrition some immediate action is taken but subsequently things return to their slovenly slipshod pace. This is visible from the fact that even though 60% children are suffering from malnutrition, the state government has neither formulated a nutrition policy nor has any serious effort been made to combat the scourge of malnutrition.

Feudalism crushed the forest rights claims of tribal

Now the work to dig-up the trench had been started in the Rajnagar village of Tiketanpur panchayat and agriculture farms of tribal are covered this trench. Under the forest Rights Act, 2005 tribal had submitted their claim forms in may 2008 on the land which they are cultivating since generations. 60 acres of land has been possessed by 27 families. But forest department officials were unable to digest that. So they decided for excavate a trench on that land in July 2008. A trench is tunnel which is about 3 meter broad & 15-20 feet deep, so that it cannot be crossed over by cattles or for transferring resouces. This trench will take over the farms & homes of 5 tribal families. Along with this tribal will also be debarred of other forest resources live fuel wood, animal foder, and other forest products which are one of the major source of their livelihood.

According to Ramdev Charmkar, 175 tribal & dalit families had land in their possession since 1980s. Forest department officials have adopted brutal attitude to displace these tribals & dalits. And those beaten up by the forest department had left their holdings. Thus now only 27 families are left with 60 acres of land. So the new tactics of digging has been adopted to take over the land of these 27 families.

Government Officers deceived Tribal

“Under the FRA the tribal from Khara Panchayat has submitted their claim forms in July 2008. In last week of Jan’09 village patwari, panchayat secretary, forest officer & DPIP secretary visited the village & told them that to get the patta they need to give Rs.500 per bhiga (5acre) land. Villagers were made to take loans at high rate of interest from Thakur. Villagers in lack of knowledge about the Forest Rights Act gave the amount of Rs.500 or 1000. After taking away the money they had not visited the village again. Whenever adivasis approached them for patta they were treated badly by these officials.

Our mining lease is ‘gifted’ to feudalism



This year too, the ‘kol’ adivasis of Khara Panchayat, Jawa Block, Rewa district in Madhya Pradesh will not be granted the lease to break stones. For the past five years, they have been pleading to be allowed to break stones in the stone quarries that are in their village. They are entitled to have access to the natural resources in their own village but they are denied their entitlements. Hence, they are compelled to migrate en masse to the neighbouring Shankargad. Shankargad in Uttar Pradesh also has stone quarries.

Khara Panchayat in Rewa district of Madhya Pradesh has 60 to 70 families, numbering around 200 persons. With the exception of a miniscule 15 to 16 children and old people, all the rest have migrated in search of a livelihood. Those left behind in Khara village are seen either with a hammer or a crowbar in their hands.

If you go in a flashback to Tapaspurva village in Khara Panchayat, their only source of livelihood is breaking stones in the stone quarry. Illegal stone-breaking continues unabated in the mines that belong to the Forest Department. Lawful mining also goes on, but on a comparatively smaller scale. Owing to scanty rainfall here in the past four to five years, the crops have failed and hence chances of employment in the agricultural sector are almost non-existent. (One may wonder where these fields have come from, but hold on; we will shift our attention to that later).

The people here considered the possibility of getting a sanctioned access to these mines, which would eventually pave the way for obtaining a mining lease, thereby making it their main source of livelihood. Five years ago, they repeatedly approached the Panchayat to this effect. The Panchayat paid no attention to their applications. Their efforts continued as they sent their applications to the Chief Executive Officer and to the Sub-Divisional Magistrate. They gave them an assurance. In 2007, the adivasis sent an application the Mr. D.P. Ahuja, the District Magistrate. Nothing happened. In 2008, they sent yet another application to Ms. M. Geeta, the then District Magistrate.

Ms. Geeta gave them the assurance that if the Gram Sabha gives the approval, they would have to pay INR five thousand and they would get the lease. The adivasis returned with some hope and decided to demand a Gram Sabha in their own village. However, till date, no Gram Sabha has taken place, and the adivasis are denied entitlement to the natural resources in their own village.

Why are the adivasis demanding a mining lease?

As mentioned earlier, the adivasis depend solely on mining leases for their livelihood. Agriculture, is also to some extent a means of livelihood, but is entirely dependent on the rainfall. That is why they have no other choice other than breaking stones for a living in the stone quarries. Siyasharan from Purva village says that it takes 15days to break stones to fill a 10-wheel truck. This fetches them INR 2500. This works out to each labourer earning INR 70 to 80 per day. But this is not a regular income. When Forest Department officials come on surprise raids, the stone-breakers are compelled to abandon their implements and run for their life. Sometimes, they do not return to



work for a few days. To add insult to injury, the Forest Department officials carry away the heaps of broken stones. If the adivasis are caught off guard, they are fined. In the year 2006-07, Laxmi and Bhola were fined.

When the contractor from Uttar Pradesh comes with his truck, the broken stones are sold to him. The villagers say that a certain contractor from Uttar Pradesh called Agrasen Mishra comes to buy their stones. He is lawfully not authorized to buy stones, but he is in league with forest department officials. Had the villagers been given the mining lease to break stones, they would have earned around INR 10,000 for the same amount of stones. Besides, it would be a lawful and dignified means of earning a living. That is why they are demanding a mining lease to break stones.

Why does the Gram Sabha not pay heed to their proposal?

Precisely, what is the reason behind the Gram Sabha's refusal to accept the proposal of the adivasis?

Raj Narayan Adivasi, who is the deputy Sarpanch and village head says, "The proposal will be accepted only if there is a Gram Sabha. When there has never been a Gram Sabha, how will the proposal be passed? The Gram Sabha has not



met even once for the past five years. We made many attempts. We approached the Sarpanch, then the Secretary, but all in vain. Tired and helpless, we have given up hope."

We probed a little further as to why the Gram Sabha never met. Everyone is speechless. Breaking the silence, Raj Narayan himself says that whenever he speaks about their rights and entitlements, it becomes very irksome for everyone. He says that in the run-up to the Panchayat elections in the year 2004, the Sarpanch contested the elections promising to provide agricultural land to every adivasi in the village. Therefore, all the villagers supported the Sarpanch and voted him into power. After his victory, the

Sarpanch never uttered a word regarding the land to the adivasis. He says, one fine day he went to the Panchayat Office and reminded the Sarpanch about his promise. The Sarpanch refused point blank to give the land. He further threatened

that if anyone broached the issue in future, he would shoot and reduce him to smoke.

Raj Narayan recounts how he challenged the Sarpanch saying that if they did not get the land within three days, they would grab it themselves. He says, “three days later, the adivasis came together under the banner ‘Birsa Munda Land Rights Campaign’ and forcefully appropriated a piece of land. This was in July 2005. The Panchayat sent information to the local administration in this regard. Higher officials from the Forest and Police department came on the scene. In this way, they tried to warn and threaten us. But we did not accept defeat. Five hundred of us adivasis took turns round the clock to keep guard. Eventually, the administration allotted this land to us.”

“The defeat of the Sarpanch in the elections was seen as a defeat of the Panchayat. Today, we are bearing the brunt of this defeat at the instance of the Sarpanch and several people of the upper caste. For many days after the incident, they harassed us in different ways – by blocking access to our settlement and by verbal abuse.”

Why did the adivasis not lodge a complaint with the police station to this effect?

To this, they respond, “when the local administration and the police is hell-bent on labeling us ‘naxalites’ to whom should we address our grievance?”

These are Naxalites from Jharkhand:

“On the basis of the report from the Sarpanch, the local administration is engaged in declaring that all adivasis are Naxalites. Media clippings of that time reveal how the Government made our campaign for our entitlements appear as acts of naxalism. Wherever we go, people call us naxalites. Strangely, in this very Purva village, some time ago, the villagers had caught the ration shop-keeper indulging in malpractices in the distribution of ration. This is another reason why the Sarpanch, the Deputy Sarpanch and upper caste people are annoyed with the adivasis.

Neither employment nor guarantee:

Despite our consistent efforts to demand employment, not a single person in this village has been given a job card. They have the job cards but they are worthless. All the people got together and made an application to the Sarpanch asking for employment. The Sarpanch bluntly refused saying, “Do what you like, you will not be given the job cards.” No matter which department you approach or this purpose, we have ‘our men’ in all high places.

The lease was given to the Collector:

Eventually, the Panchayat has granted the mining lease to the Collector. Don't be surprised! The mining lease was not given to the Collector or the District Magistrate, but to Vishvanath Singh, a man of the upper caste whom the people reverently address as 'Collector'. The Panchayat made a public exposure of how feudalism works. In response to the adivasis demand for five long years, the mining lease was awarded to the 'Collector' for ten years. One wonders how the mining lease has been awarded when the Gram Sabha has not been held at all. Going by Panchayat records, no Gram Sabha has been held. It is quite another matter which persons might have been present for this 'Gram Sabha'

Violation of adivasis' rights and traditional forest rights:

After the enactment of Forest Laws, whenever people approached the Panchayat either individually or collectively with their applications, the Forest Rights Committee (which exists only on paper) in the Panchayat did not accept them. The people had to file their claims at the Jawa Development Office. A year later, no one knows what happened to those claims. Neither has any forest department official disclosed the truth about the claims nor what happened to their claims. If you go to the Block Development Office, you are told that their claims have been sent back to the Panchayat. And if you go to the Panchayat, you are not told anything. The feudal lords have tried to snatch even this entitlement of the adivasi. The reason for the disappearance of their claims is that the adivasis have demanded entitlement to the mining lease, forest produce and rearing of fish. This has become a nuisance for the Panchayat as they do not want the adivasis to get these entitlements. When the adivasis made claims to their entitlements, forest department officials demanded a bribe of INR 500 to 1000 per claimant. The adivasis refused to pay these bribes, hence the annoyance.

Owing to drought conditions, nothing was cultivated on the controversial piece of land. The adivasis have neither got the mining lease, nor their entitlement to the benefits of the Employment Guarantee Scheme. The job card is just another piece of paper – an empty promise. Hence the entire village of Purva has migrated in search of greener pastures. Feudalism has once again strangled the prospects of the adivasis and proved to be an obstacle to their development. One expects the administration to ensure that the marginalized get the benefit of the welfare schemes. Instead, the government has got into an overdrive to declare the adivasis as naxalites, thus depriving them of their livelihood and entitlements.

Children are dying but administration is still snoozing

Abraham Lincoln's once said that "government of the people, by the people, for the people, shall not perish from the earth". But if the executive bodies of the government which are very pillar the government itself is exploiting & exposing threats to the primitive tribal groups though the use of feudalistic attitude then existence of the tribal groups will soon be endangered. The PTGs are made devoid of their basic rights. Their is no employment for them, no schools, no aganwadi centers, no medical care for them. They are forcibly displaced from their natural inhabitation. And such conditions are created in which they are dying of starvation & hunger.

Asian Human Rights Commission (AHRC) has also released urgent appeal under the Hunger alert programme on the condition of starvation & hunger in Rewa district.

Though the Samaj Chetna Adhikar Manch, MPLSSM, Right to Food Campaign and its support groups has also acquainted the district administration regarding the awful situation of malnutrition of Java block of the Rewa district. Still the situation didn't change a bit even. District administration remains apathetic to ensure food security & to curb malnutrition. Under PDS the vulnerable poor are neither provided with regular supply of food grains nor in definite quantity. No mid day meal in schools & SNP in AWCs are being distributed in Schools & AWCs since more than a month in Ramnagar, Kureli, Kalyanpur, Kuthila & Ramgadhwa villages of java block due to the non identification of self helps groups (SHGs) for preparing nutritious food for children. According to the villagers, immunization has not been done since last six months in these places. The payment of wages under NREGA is pending for more than a year. Despite the fact that the villagers are deprived of their rights to food and work caused by lack of livelihood and the malfunction of government schemes, the state government as well as local administration have not taken any substantial action for those children and their families till now. They are thus forced to migrate to in search of livelihood resulting in bed effect on the health of children & are continuously seized by malnutrition.

State response on starvation protocol

S.no	State	Reference no.	Response received	Action need to be taken on their response
1	Karnataka	15.2.2010 Chs 56/2010	<p>A detailed protocol for state action in the context of starvation deaths has been sent to all the DCs. According priority to the implementation of NREGA. So far during the current year 55.76 lak households have been registered and issued Job cards, 1387.36 lakh person days of employment is generated; 27.24 lakh households are provided employment; 2.81 lakh households have already completed 100 days of employment; the average person days of employment generated per household is 50.92 and the total expenditure incurred is Rs. 1811.87 crores. During the last year, the expenditure under NREGA was around Rs. 357 crores.</p> <p>There has been no starvation deaths reported in the state or any allegation of starvation deaths. However, a careful watch is being kept to prevent starvation deaths among the poor and vulnerable households.</p>	
2.	Punjab	11.2.2010 No. 27/3/2006/IFD/204	All the concerned have been directed to strictly comply through this office letter no. 27/3/2006/IFD/164 dt 3/2/2010. They have been asked to sent there report to the Director Food, Civil Supplies & Consumer Affairs, Punjab.	
3	Goa	Dt. 2.2.10 by Directorate of Women & Child Dev.	<p>the good quality of supplementary food is provided under SNP to improve the nutritional and health status and thereby reduce the incidence of mortality, malnutrition and school – drop outs. Also focus is given in building a strong foundation for proper psychological, physical and social development of child.</p> <p>Under SNP, DTH packets of cereals and pulses are provided to pregnant and nursing mothers as well as to the children in the age group of six months to 2-1/2 years. All the 1212 AWCs operating in the State provide SNP for 25 days in a month and 300 days in a year. For the year 2009 – 10 (upto December) an average of 45442 children in the age group of 6 months to 6 years, 12404 pregnant and lactating mothers have been covered under the SNP.</p>	
4.	Meghalaya	16.2.2010	<p>Incidents of starvation deaths have never been reported from the various block and districts under ICDS scheme of this state government. However, filed officers have been instructed to remain vigilant and to take necessary and appropriate steps if such situation arises.</p> <p>Judging from the consolidated reports furnished by the CDPO, the status of</p>	

			<p>malnutrition is much lower compared with the report of NHFS III. This may be due to the fact that the figures reflected in the consolidated reports cover children enrolled and attending AWC, whereas the report of the NHFS III is taken per household and also covers villages with no AWC.</p> <p>However, it may be stated that the reported figure in the NFHS III report with regard to Meghalaya has been a matter of concern for this State Government. In the meeting held at ND on 1st Dec,08 with Officials of the MoWCD, this matter was elaborated upon and discussed and decided that a joint survey is to be conducted between Social Welfare Officials, ICDS functionaries, Distt Social Welfare Officals, Project Officials with the Officials and functionaries of the Health & family Welfare Deptt so as to get more clarity on issue of data on malnutrition and report on this is being awaited.</p> <p>Further, North Eastern Hill University, Deptt of Anthropology has also been assigned to undertake an evaluation study of SNP in 14 selected projects with effect from 2008 -09 and a report on this is also being awaited.</p> <p>Meghalaya has already implemented and complied with the directives of GoI to provide SNP at the revised nutritional norms respectively since April, 2009. Moreover, in order to meet the gap in terms of requirement of nutritive value of SNP foodstuff, this department is taking up with the State Planning Deptt for allocation of additional fund.</p> <p>This has the approval of the Competent Authority'</p>	
5.	Meghalaya	24 th Februrary, 2010	<p>Incidents of starvation deaths have never been reported from the various block and district level offices under ICDS scheme of this state government. However, field officers have been instructed to remain vigilant and to take necessary and appropriate steps if such situation arises.</p>	
6..	Himachal Pradesh	15 th Feb , 2010	<p>The state have circulated the suggested protocol to all DCs in the state for information and for evolving local, area specific strategies to combat starvation by ensuring convergence of all Govt. programmes and services. The state has not reported any starvation death so far. The state also has a fairly extensive education, health and ICDS Network. The PDS system is functional and the State Govt. is suppleemting the Govt. of India's support with its own subsidized pulses, edible oils and iodised salt. The state also has extensive social security coverage. Nevertheless there is no denying that constant vigil against this pernicious evil needs to be maintained and we intend to remain vigilant.</p>	

STARVATION: IMPACT AND REPOSE:

A Tracking Survey Instrument

Notes for Researchers

Definition of Starvation

Hunger: denial of adequate food to ensure active and healthy life.

Starvation: If hunger is prolonged to an extent that it threatens survival, or renders the person amenable to succumb because of prolonged food denials to curable ailments, then the person is living with starvation.

If these conditions actually lead to death, then this is a *starvation death*, even though the proximate cause in every case would be a medical failure. But the cause of death is not the medical failure, but the prolonged denial of nutrition that led to a person succumbing to medical conditions which a well fed healthy person would easily be able to combat and survive.

The focus of this study is not to retrospectively establish the fact of starvation deaths, but instead to examine state response in the aftermath of a death which involved major and prolonged food denials. It looks primarily at state response to the surviving families, and to members of tribe, caste, class, gender and social category groups who live threatened with similar starvation conditions. It also looks at social (primarily local community responses) to starvation.

Features of Starvation

1. Starvation is ultimately not primarily a technical issue, but is rather related to deep-

- rooted socio-economic inequities, which require radical and systemic solutions
2. Starvation and malnutrition related deaths are *public health problems requiring community diagnosis*. They differ from classical "disease related mortality".
 3. Dilemma is deepened because 'generally prevalent "baseline" malnutrition, gradually worsening severe malnutrition and definite starvation merge with each other along a seamless continuum.
 4. Public officials, the lay public and sometimes even professionals believe that starvation requires no intake of food. Starvation is levels of food intake that are unsustainable for the continuance of life itself. An adult who eats 850 kilocalories of food daily or less may be presumed to be starving. This cut-off is based on research that shows that a person who weighs 50 kilograms, if she or he engage in no physical activity altogether, they require at least 850 kilocalories merely to stay alive, even though they perform no work at all.
 5. Another reliable physiological indication of starvation is a BMI (Body Mass Index) of 16 and less. Body Mass Index or the BMI is the ratio of the weight of the adult in kilograms to the square of her height in metres.
 6. Nutritional status of children is easy to derive from the child's weight and age. Weight of child compared to the ideal weight for that age mentioned in the NCHS standards. Percentage of up to 80 per cent normal, 60 to 80 percent mild to moderately malnourished, and below 60 per cent severe, below 50 per cent alarming.

Survey Instrument

Please seek informed consent of the family of the deceased, and assess at every stage if the interview is causing avoidable distress. In such a situation, please call off the interview immediately. Also respect the dignity and suffering of the bereaved family.

Please select one or more willing members of the family of the deceased as informants, preferably adults. If the deceased is without a family, please talk to neighbours or friends, if any.

Before the interview, please collect any official documents about cause of death, such as post mortem report, or inquest, or report of administrative enquiry.

Please hold interview if possible in the household of the deceased

1. Details of Informant(s)

1. Name of Informant(s)
2. Relationship with Deceased
3. Age of Informant(s)
4. Gender of Informant(s)
5. Did Informant(s) live in same household as deceased at time of death?
6. If not, how does informant(s) know about conditions of death?

2. Details of Deceased

If interview is in home of the deceased, please give details of the home, in terms of size, assets etc

1. Name of Deceased
2. Age of Deceased
3. Gender of Deceased
4. Approximate date of death
5. Did he/she work?
6. If so, what work?
7. Was deceased bonded? If so, details.
8. Description (free-wheeling) in words of informant(s) of the circumstances and conditions of death of deceased
9. What in the views of the family was the cause of death, with reasons?
10. If this view is in conflict with official records of the causes of death, what does the informant(s) feel about the official view(s)?
11. Was the deceased food deprived before death?

12. If so, what was the length of time period of this food deprivation? What was its extent? What was its nature? What in the opinion of the informant were the causes of this food deprivation?
13. How did the deceased cope with prolonged food deprivation?
14. Was the deceased thin, losing weight, with sunken eyes and cheeks, finding difficulty in walking and everyday activities etc?
15. Was the deceased ill before the death? If so, details of ailments, length of time, treatment etc.
16. Was the deceased a working and earning member? If so, what was the livelihood and status for one year before death (earnings, regularity, conditions of work etc)

3. Details of other family members

1. Have any other members of the household died in the past 2 years? If so, please ask the same questions as about the deceased who is the subject of the investigation.
2. Who are the other members of the family who survive the deceased? Names, age, gender, relationships with the deceased?
3. Did any or all of these family members suffer from food deprivation? If so, what was the length of time period of this food deprivation? What was its extent? What was its nature? What in the opinion of the informant(s) were the causes of this food deprivation?
4. How did the survivors cope with prolonged food deprivation?
5. Are the survivors thin, losing weight, with sunken eyes and cheeks, finding difficulty in walking and everyday activities etc?
6. Are the survivors chronically ill at the time of the investigation? If so, details of ailments, length of time, treatment etc.
7. Who (if any) are the other earning members of the household? If any, what was the livelihood and status for one year before death (earnings, regularity, conditions of work etc)
8. Are any of the surviving members of the deceased bonded? If so, details.

9. Did any member(s) migrate over 3 years before the death? If so, details?
10. Did any member(s) sell/ mortgage immovable/ moveable assets over 3 years before the death? If so, details?

4. Access to government schemes

Did deceased or eligible members of various food and livelihood schemes access these:

- For children below 6 years, and pregnant or nursing mothers, did they access services including supplementary nutrition from an operational anganwadi centre running in the hamlet/village?
- If not, does an ICDS centre exist in their hamlet?
- If their small children were enrolled and regularly availing of the services of ICDS, was their decline of nutritional status identified and addressed on time; if not, why not?
- Do children from 6 to 14 years in the nearby government school access midday meals?
- If not, does the nearest school serve hot cooked MDMs?
- Were the children enrolled in the school? If not, why not?
- Do they have a ration card?
- If so, is it APL/ BPL/ AAY?
- Does the ration shop provide foodgrains in the right quantity (35 kg per month), price (see annexure 1) and on time (when sought every month regularly)?
- Did pregnant mothers get NMBS/JSY assistance?
- Did deceased (if working) or any working adult member of family have a job card under NREGA?
- If so, how many days of work did they get in the past year?
- Did family get assistance under NFBS if deceased was earning adult? If so, how much and how long after death?

- Did all old people receive pensions, and were these distributed at their doorstep on time every month?
- The same questions would apply to widows and disabled people in states with schemes for pensions for these groups?

5. Conditions of Community and Social Group

The National Human Right Commission established that death is not necessary as evidence of starvation. Discourse around starvation should shift from not just those who died, but those who survived but are deeply threatened.

Therefore, in the second phase of investigation, the researcher should identify the other members of the tribe, caste, class, gender or age group to which the affected people belong and discussions should be carried forward with them, in focus group discussions.

1. Broader questions regarding functioning of the food and livelihood schemes may be asked, such as

- is there an operational anganwadi centre running in the village,
- is the nearby government school providing hot cooked midday meals to the children,
- does the ration shop provide foodgrains in the right quantity, price and on time,
- how many elderly persons in the village obtain social security benefits or pensions from the state and so on.

2. Have any other members of the relevant tribe, caste, class, gender or age group to which the affected people belong died in the past 2 years, for reasons that people believe were connected with serious and prolonged food deprivation? If so, please discuss in the same questions as about the deceased who is the subject of the investigation.

3. Do any or all of the surviving members of the tribe, caste, class, gender or age group to which the affected people belong suffer from food deprivation? If so, what was the length of time period of this food deprivation? What was its extent? What was its nature? What in the opinion of the FGD participants were the causes of this food deprivation?
4. How did they survivors cope with prolonged food deprivation?
5. Are many of the members of the tribe, caste, class, gender or age group thin, losing weight, with sunken eyes and cheeks, finding difficulty in walking and everyday activities etc?
6. Are the members of the tribe, caste, class, gender or age group chronically ill at the time of the investigation? If so, details of ailments, length of time, treatment etc.
7. What is their livelihood and status for one year before the death being investigated (earnings, regularity, conditions of work etc)
8. Are any of the members of the tribe, caste, class, gender or age group bonded? If so, details.
9. Did any member(s) migrate over 3 years before the death? If so, details?
10. Did any member(s) sell/ mortgage immovable/ moveable assets over 3 years before the death? If so, details?

6. Conclusions about food deprivation

1. Conclusions from the above about the overall field situation in the family and community: not mainly whether there was a starvation death, but whether the specific family, as well as in that location the local community (such as Musahars) and the social (such as single women) and class (such as landless workers) categories to which she or he belongs, subsist in conditions of prolonged deprivation of adequate food with dignity, or in continuous uncertainty about the availability of food, or dependence on charity or debt bondage for food. It is reiterated that the idea is not to probe death and its causes but only to understand the poverty and destitution faced by the families and by similarly affected people. Attempt should also be made to understand the root cause of poverty such as livelihood crisis, heavy debt, crop failures etc.

2. Conclusions about the access to food and livelihood schemes, and barriers thereto, faced by the local community, tribe, caste, class, gender or age group to which the affected people belong, and the village (or urban settlement) at large.

These conclusions should be recorded in writing, and shared and explained in the local language to affected people and communities, local elected leaders and local officials, and their feedback incorporated.

7. State Interventions in Situations of Suspected Starvation:

This section should be based on feedback from 4 sources a) enquiry from family of deceased; b) enquiry from the community, class or social category to which the deceased belonged; c) discussions with local and district level officials and panchayat members; and d) personal observations of researchers.

1. Relief and food rights for Family of Deceased:

- a) Did state or panchayat authorities ensure immediate food availability to the family? If so, details of amount, periodicity, cost if any, terms etc.
- b) Did state or panchayat authorities organise food availability on a more permanent basis at highly subsidised rates to family, by the distribution to them of AAY cards, or at least BPL cards?
- c) Did state or panchayat authorities ensure early sanction and release of insurance under NFBS?
- d) Did state or panchayat authorities ensure their coverage of all food and livelihood schemes for which they are eligible such as ICDS, MDM, NREGA and old age, widows and disability pensions?
- e) Did state or panchayat authorities ensure for children of families of deceased, their admission to SC ST hostels if they choose, so that their education, food and protection is secured?
- f) Did state or panchayat authorities organise psycho-social support through professional and trained lay counsellors to the survivors of the deceased?

g) Did state or panchayat authorities organise for infants, small children, expectant and nursing mothers, supply of SNP from ICDS and hospitalisation where necessary, arrangements for nutrition rehabilitation, and health-care including immunization?

h) Did state or panchayat authorities identify in consultation with the survivors in the family, the reasons for livelihoods denial, collapse or insecurities and assist them to build a secure livelihood through measures like land allotment and restoration in case of alienation?

2. Relief and food rights for others identified to be similarly threatened: for the community, class or social category to which the family of the affected person belongs.

1. Were there any organised official efforts to identify reasons for failures of food schemes to prevent and address starvation, including the following:

- Careful official and well publicised social audit of why they could not access their food rights from the food and livelihood schemes relevant for them?
- Were their small children enrolled and regularly availing of the services of ICDS, and was their decline of nutritional status identified and addressed on time; if not, why not?
- Were the older children in school, and did they access regular and nutritious mid-day meals?
- Did they have ration cards, AAY or at least BPL, and did they regular receive the prescribed quota of 35 kilograms of subsidised food grains from the ration shop; if no, again why not?

- Did all old people receive pensions, and were these distributed at their doorstep on time every month?
- The same questions would apply to widows and disabled people in states with schemes for pensions for these groups?
- Did they seek job cards and work, and was this given to them in accordance with their legal entitlements under the NREGA?

2. Did district Panchayat leaders and Collector, within 3 months from the date of initial information:

- fix responsibility at all levels for the starvation death
- punish those found guilty of lapse in their duties
- remedy gaps of funds, resources and personnel
- address issues of discrimination and social exclusion
- ensure time-bound coverage of all affected and threatened people by AAY ration cards, job cards under NREGA, old age, widow and disability pensions, and ICDS services, including nutritional rehabilitation and hospitalisation where found necessary.
- were there further deaths after the first death from similar conditions of severe food deprivation?

3. In the long run, were local structural sources of pauperisation identified and local solutions developed, possibly in consultation with the gram sabha and village panchayat? (These may include failures to implement land reforms, tribal land alienation, caste discrimination, micro minor irrigation and watershed development, availability of formal credit for agriculture and artisans, access to forests and choices of agricultural technology and cropping patterns). Were any of these addressed? What was the impact if any of these measures?

4. If any funded NGO works in the area, please consider it also as a duty bearer and ask similar questions as about the role of the state.

Report of the Balangir starvation death case

Date of visit: 17th September 2009

Person visited: Sameet Panda, researcher with the office of the State Advisor

Pradeep Baisakh, who works with MiRC, Aide et Action. He is also a Development Journalist

Initial source of information: Local Oriya daily "Dharitri" reported the matter on 15th September 2009

The story as per the initial source: Three starvation death cases were reported in the local Oriya daily "Dharitri" on dated 15th September 2009. As per the report three persons namely Siba Prasad Bariha (3), Gundru Bariha (1) and Bimla Bariha (35) died respectively out of starvation from Buromal village of Bhanpur Panchayat under Khaprakhhol block of Balangir district of Orissa. Three deaths occurred consecutively on 6th, 7th and 9th September 2009 respectively. Late Bimla Bariha, wife of Jhintu Bariha is the mother of Siba Prasad and Gundru.

Procedure followed in the visit: The member team visited the Chabripali hamlet of Buromal village on 17th September 2009. Prior to the visit a letter was sent on 15th September 2009 to the District Collector of Balangir copy marked to the Chief Secretary, Secretary R&DM and the Commissioner's office in New Delhi for onward communication.

Details of the family:

Name of the deceased's: Ms Bimla Bariha (35), Sibaprasad Bariha (3 year old male child), Gundru Bariha (one year old female child)

Head of household: Jhintu Bariha (42), husband of Bimla and father of Siba and Gundru

Name of the hamlet: Chabripali (in Buromal village of Bhanpur Panchayat under Khaprakhhol block of Balangir district)

House type: Kuchha

Land holding status: Nil

Occupation: casual/migrant labour (no regular earning)

Availability of ration / entitlement cards: No

(Jhintu Bariha is staying separately from his parents after his marriage, about eight years ago. His father is having a BPL card but Jhintu does not possess any entitlement card of his own, so he is not availing any benefits – PDS and others)

Brief profile of the village: Chabripali hamlet is part of Buromal revenue village inhabited by 70 households. It is around 90 kilometers away from District head quarters (Balangir) and 20 kms away from Block headquarters (Khaprakhol). Scheduled Tribes constitutes around 80 % of the total population. Most of the people are poor and agriculture and forest are the main source of source of their livelihood. Due to acute poverty, a good number of villagers, mostly from SC and ST communities have been migrating out in pursuit of livelihood every year.

Individuals interacted with:

Jhantu Bariha (aged about 42), husband of Bimla and father of Siba and Gundru

Champo Bariha (about 80), father of Jhantu Bariha

Minji Bariha, (aged about 70), mother of Jhantu Bariha

Jaibihari Bariha, local ward member

Chudamani Nag, Sarpanch and also with other villagers

Ms Rebati Meher, Anganwadi worker of Chabripali mini AWC

Dr. Meher the junior doctor present in Chabripali Mobile health unit

Chandramani Seth, BDO, Khaprakhol

Deben Pradhan, Sub-Divisional Magistrate, Patnagarh

Dr. Balaram Panigrahi, In-charge at the district hospital, Balangir

Sanjay Kumar Habada, Collector in charge Balangir district.

The Report

The child Siba Prasad Bariha (3) and the infant, Gundru Bariha (1) were said to be ill and succumbed to the illness one after another. Mother Bimala also died after two days of the death of her children. Jhantu Bariha and his son Ramprasad Bariha are the two surviving member of the nuclear family. During the visit, the team met his parents - Champi Bariha (80), father and Bimpi Bariha (70), mother. Who are living in a small hut with very meagre belonging. Their younger son Bhurshava Bariha also stays with the grandparents. Jhantu and his son were taken by the government authorities for treatment in Bolangir hospital. During discussion, the old couple told that they have a BPL card bearing no: 52, by which they get 25 kilograms of rice @ Rs 50 per month. Mr. Champi Bariha is also a NOAP beneficiary and gets Rs 200 per month as old age pension. Though Ms. Bariha is entitled to receive old age pension, she has not got it yet. Champi Bariha says he used to beg when he was in good health but now is unable to go as he is not keeping well for last few months.

The team also interacted with the villagers of Chabripali after discussing with the old couple. All were of the opinion that Jhinktu Bariha and his family had been suffering

from regular food deprivation, though there was difference of opinion about the cause of the death.

About Jhintu and his profession:

Jhintu Braiha has almost been regularly migrating out of state in search of livelihood for last some years-particularly after his marriage. Three years before when he was working in Madhya Pradesh in an agriculture farm as an agricultural labourer, he got an electric shock which partially damaged his left hand and left leg. As a result, he could not again go out to work but tried manage in the village, where he along with his wife used to do minor agricultural works here and there. But, as there was dearth of such work in and around, he had no option but to go out again. Last year, he along with his family migrated to work in the brick kilns of Andhra Pradesh after taking an advance of Rs 10,000 from a labour contractor. The advance money was to be used to repay his debts. Jhintu fell sick during the work in Andhra Pradesh so he was brought back to the village in June 2009. Whenever they are in village the family tries hard to gather adequate food for them but they hardly succeed. This time around, it was very difficult for Jhintu to work as he was too ill and Bimla also cannot go out full time for work as she had small Gundru (the one year old girl child) in her lap. As the whole family was suffering badly from gross inadequacy of income, the only help coming was the share of PDS rice from their old parents.

Food intake of the family:

Ramprasad (aged about 7), is the elder and the only surviving child of Jhintu Bariha. The team met him at the Balangir hospital and asked him about the food intake of the family. As per him he use to take *mudhi* (puffed rice) with black tea given by their grandparents, rice with either salt or with any wild spinach collected from the forest but when asked about the food at the night he started crying. When insisted he told that he used to sleep empty stomach in the night. Whenever he asked for food in the night the parents used to give him a glass of water to drink and used to ask him to sleep quietly. He told that he was at least not going empty in night while he was in Andhra as a migrant child.

The total food and monetary inflow to the family of five are¹:

1. 12 ½ kg of rice-half of the rice their old parents were getting under 25kg rice scheme under PDS
2. Some from the old age pension that Champi Bariha used to get
3. Some meagre occasional help from the community by way of begging from neighbourhood

The above description of food intake for the family of five may clearly give a picture of the severity of the vulnerable condition of the family. The inadequate food intake was taking heavy toll on the health of the whole family which in turn was reducing their ability to work to earn. They were therefore caught in the vicious cycle of poverty and starvation.

¹ This description is as per the version of the old parents of Jhintu-Champi and Bimpi. Jhintu, who team met in Balangir hospital, described in the same way

Ms Bimpi, the old mother of Jhintu, has still a clear way of describing the starved situation of the family. She says that when the small two children would cry out of hunger, they start sucking the breast of their mother with the hope that milk would come out and drive their hunger. But their hope would be dashed as nothing would come out. She emphasises "How can there be secretion of milk from the mother's breast if the mother herself does not get enough food to eat?"

Champi and Bimpi clearly tells that the deaths are due to starvation, though the two children had fever at the time of death-but that is due to prolonged starvation and breakdown of the immunity system.

What doctor has to say:

The team met Dr. Balaram Panigrahi, the in-charge medical officer at the head quarter hospital Balangir. He said, both Jhintu and Ramprasad were suffering from loose motion and fever when admitted in the hospital. About the treatment he said that though Jhintu tested negative to malaria, but responded positively to anti-malaria doses; this is clinical malaria. Ramprasad was given a bottle of blood as he was identified anaemic, which is symptom of presence of splin-which is caused by malaria. So he also can be called to have clinical malaria. On the starvation aspect of the family, the doctor said that one has to visit the food history of the family to ascertain the prolong food deprivation if any.

A probable conspiracy:

The mobile health unit camping at the village from 10th September 2009 informed the team that they found one hundred and twenty two cases of malaria positive in the village and all of them have been administered anti-malaria doses. The population of the hamlet is 370. When enquired if there is any past record of malaria deaths in the hamlet in last two-three years, the doctor present replied in negative. By that time the team had already interacted with many villagers, many of whom were not observed to have any post-malarial weakness and were looking quite alright-this led to suspicion. One of the team members interacted with the villagers and was informed by a group of youth sitting in the village that only four five people had fever, but many villagers were asked to take anti malarial doses. Mr. Bideshi Meher (about 41), had no fever; but his blood was tested and he was administered malaria doses. After taking anti malarial pills, he fell ill. "The doctors told that malaria has spread and I should take these medicines. If I do not take these I will have malaria." says Bideshi. After he felt uncomfortable taking the malaria doses, he decided to discontinue them and now he is well! He also showed the anti-malaria pills and doctor prescriptions to the said team member. Santosh Meher, a youth shared that same was the case with him, that he was also administered the malaria doses though he had no fever. But Santosh was not ready to cooperate to show his prescriptions and medicines.

It may be noted that the villagers were generally tight-lipped on the matter. Some people in the village (apparently those who have a good landed property and seem to be influential) attempted to eavesdrop the discussion of the team with the old parents of Jhintu and also tried to join. It is they who told to the team, during an informal small village meeting, that it's a malaria death. The same people followed the movement of the team-understandably to keep track of the interaction of the team

with different stake-holders. They also followed, uninvited, while the team went to the village school where the mobile health unit was parked. All these forced one of the team members to find out way and have an independent interaction with some villagers. There is a feelings of the team that a conspiracy has been hatched by the administration to name this as a malaria related death, which otherwise is a clear case of starvation death case. In order to cover up, the doctors have administered malaria doses to many who did not have any fever. This may be the cause why the media initially reported it as a case of starvation death, but later it was reported as malaria one. However, further probe is needed to establish the truth behind this 'probable conspiracy'.

Action taken by the administration:

Though it acted very late but the Sarpanch gave the family 12.5 kilograms of rice under gratuitous relief (GR) on 9th September 2009. Another 32 families have also been provided with rice under GR facility by the Panchayat to prevent further hunger and starvation in the village. The medical officer from the mobile unit after getting the information visited Jhinktu's family and sent him and his son to the Patnagarh sub divisional medical hospital and subsequently they were shifted to the district head quarter hospital Balangir for further treatment.

The BDO of Khaprakhol, Mr. Chandramani Seth and the SDM Patnagarh Mr. Deben Pradhan visited the village on 11th September 2009. They sanctioned an IAY house to the deceased's family. The collector-in-charge of the district Mr. Sanjay Kumar Habada also visited the village on 13th of the month and handed over a cheque of Rs 10, 000 to the deceased's family under National Family Benefit Scheme. He also asked the BDO to sanction disability pension to Jhintu and an old age pension for Jhintu's mother-Bimpi under Madhubabu Pension Yojna (state pension scheme) on an urgent basis. The administration showed its helplessness in providing an Antodaya card to Jhintu's family as they are bound by the quota fixed by the state and centre.

Functioning of food related scheme:

The team tried to understand the functioning of food related scheme in the short span of time.

i. Public distribution system (PDS)

It was found that Jhintu Bariha, though poor and landless, is not covered under PDS. He is not a BPL Card holder. Since 1997, BPL list has not been updated in the state, not to talk of Jhintu's village. Though Jhintu has been staying separately since long but has not been covered under BPL. If we go by village statistics there are altogether 70 households out of which BPL – 29 household, AAY-8 household and 23 household have got APL cards. This shows that 20 households does not have any card. As per the BDO Khaprakhol the APL card has been allocated to the families whose name appears in the 1997 BPL survey. Others family have not been allocated any cards. As the state is yet to finalise the 2002 BPL survey many of the poor and needy family are deprived of any ration card.

ii. The Two-rupees per kg rice scheme:

It functions well in the village and all the families entitled to it are told to be getting its benefit, except 20 families. Therefore the family of Jhintu could not take any advantage of it.

iii. Integrated Child Development Services Scheme (ICDS):

There is a functional Anganwadi centre in the Buromal village and Chabripali was a tag village of the centre. Though it is only one kilometre away from the centre, it was reported that none of the beneficiary from the village have got a single grain from the centre. As Jhintu had two children under the age of six they were entitled to benefits of ICDS scheme but they never got a morsel of grain from the centre. The children would have got two kilograms of rice each which could have played a major role in preventing starvation of the family and other families with children and lactating mother and suffering from acute food deprivation. As per the villager the Anganwadi worker (AWW) never visits their village.

After report of starvation death, a mini Anganwadi centre has been approved for Chabripali hamlet. Ms. Rebati Meher from Chabripali hamlet has been appointed as the AWW for the centre. The centre runs in the house premises of the AWW. As per her the centre was started on 15th September 2009 and the centre has thirty eight (38) ICDS beneficiaries and 10 emergency feeding beneficiaries. The required ration has already been delivered to the centre.

iv. Mid day meal scheme:

There is a primary school in the Chabripali hamlet. As the children interacted the mid day meal is being provided regularly in the school. Hot cooked rice, dal and soya chunk curry is being provided as noon meal in the school. As per the children the elder child (Ramprasad) used to go to the school and take meal but he was not regular- as he often migrate out with his parents. The school was closed at the time of visit as the mobile health unit was camping in the school building so the school records could not be verified.

v. National maternity benefit scheme:

No mother is provided the benefits of the scheme though many of them delivering in the home. Most of the mothers were unaware about the scheme as well.

vi. Status of National Employment Guarantee Act

It is to be mentioned here that National Rural Employment Guarantee Act (NREGA) is being implemented in Bolangir since February, 2006. The mandate of the Act is to provide minimum 100 days of employment to each registered rural household. It was found that since last 8 months NREGA work has been stopped in the village. As per the people they would never opt for migration if they would get regular employment under NREGS. While interacting with the villagers, one Mr. Sira Hati was of the view that even if they get employment the wage payment is never on time which is discouraging them to work under NREGS.

Are these starvation deaths?

a. Champi and Bimpi Bariha (parents of Jhantu): The parents of Jhantu clearly say that as the family of Jhantu was taking grossly inadequate food for a very prolonged period, the deaths are due to starvation. Even though the children were ill and feverish just before their deaths, they succumbed to starvation. They assert “anybody who does not get proper food for a long time will naturally have feverish as the immune system collapses and the health gradually deteriorates leading to death. This is what exactly happened with the kids and their mother.” They add “Bimla almost stopped taking food after her children’s death. She took food after persuasion of the villagers and her relatives. She died after two days. But the fact is less than two days of fasting cannot take anybody’s life. She also was starving for a long time. Had Jhantu and Ramprasad not taken to hospital, they would also have died”

b. Jhantu Bariha: He says that they have been starving as they do not have adequate income for he is unable to work. The gradual starving condition led to the illness culminating in death.

c. Villagers: Some say its malaria related deaths and some say its starvation deaths

d. Administration: Both the Collector-in-charge and the BDO say they are malaria deaths. They have some reasons why these could not be starvation deaths. They are (a) he had borrowed rupees 1000 from the ward member recently (b) he had borrowed ration of about 1000 rupees from the grocer shop (c) and he had borrowed 4000 rupees from somebody else and finally (d) on 8th August, the old parents of Jhantu got their quota of 25 kg rice.

The administration intended to say that as Jhantu had borrowed so much of money and parents had also got the PDS rice just before the death of the women, they would have taken food and therefore its not a starvation death.

e. Team’s view: These are clear cases of starvation death. The food intake pattern suggests the family has been starving for months together and finally succumbed to illness and died as a result. So, chronic hunger and malnutrition coupled with fever led to the deaths.

The team in fact asked the Collector-in-Charge what he understands by starvation death. The Collector-in-Charge answered that if somebody does not get any food to eat for six or seven consecutive days and succumb to death due to that can be called starvation death.

Recommendations:

The Constitution of India ensures live with dignity to all its citizen as a fundamental right (Article 21). The Supreme Court of India has told it time and again that to ensure the fundamental right the state is bound to safe guard basic minimum requirement of a person. To protect someone’s life requires availability and accessibility of food to every person, on top of all. The States is to ensure that the citizens have easy access to foodstuff. Keeping it in view, the Govt. has launched several food security and wage employment programmes for the villagers.

The incidence of alleged starvation death can be termed as non-implementation/improper implementation of food security programmes and NREGA. It is also vitally concerned with the BPL fixing criteria and updating of the BPL list. Keeping it in view, the team recommends to the administration to take the following measures in order to save the poor from chronic hunger and starvation death.

1. The 2 rupees per KG rice scheme should be extended immediately to cover all the families, not limiting it to only the ration card holders.
2. Process should be initiated so that the poor and vulnerable people who are not covered under BPL category should be covered under APL category at the earliest. As already ordered by the honourable Supreme Court the state should expedite the distribution of Antodaya card to the six categories of families sighted by the Honourable court under its order on dated 2nd May 2002. The Antodaya list should be updated earliest possible and adequate steps must be taken to ensure that this is done with due delicacy to cover all the deserving families.
3. The ICDS centre should be functional in every habitation and quantity and quality need to be ensured while distributing food.
4. The pregnant women entitled for National Maternity Benefit Scheme should be provided with the benefit without fail.
5. NREGA is the best law to provide guaranteed wage employment to the poor. But it is not being properly implemented. The labourers are not getting their dues since months together. So, the administration should take steps to immediately ensure payment of pending wages to the labourers who worked in the past and start the NREGA works in the village afresh.
6. Primary Health Centres and Community Health Centres need to be revamped with allotment of more doctors and Para-medical staff to provide ready and adequate health service to the poor.
7. Last, but most importantly, an inquiry must be ordered by the government to be done by an independent high-powered committee to probe into this case, how a conspiracy has been hatched to suppress the failure of district administration on alleged starvation death. At the same time how the district administration deceptively administered 120 people with malaria doses with the intent to give it a name of malaria death.

Rupesh
Advisor to Commissioner of the Supreme Court
IN THE CASE: PUCL Vs UI and ORS, WRIT PETITION (Civil) NO. 196 of 2001

फांक: koshish/Adv/SD/13
दिनांक: 16 अक्टूबर 09

सेवा में

माननीय सर्वोच्च न्यायालय के आयुक्त

(In the case: PUCL Vs UI and ORS, Writ Petition (Civil) No 196 of

2001)

नई दिल्ली।

विषय: मुक्ति देवी (टैटूआ टोला खरीना, पंखण्ड अतरी जिला-गया) का भूख से मौत सूचना के संदर्भ में तथ्य संकलन

महाराष्ट्र,

आपका ध्यान आकर्षित करते हुए बताना चाहता हूँ कि गया जिला के अतरी पंचण्ड अन्तर्गत टैटूआ टोला खरीना में मुक्ति देवी का भूख से मौत मिडिया द्वारा प्रकाशित एवं महुआ न्यूज पर प्रसारित के आधार पर पांच सदस्यीय टीम का गठन किया गया और उसकी रिपोर्ट आपके पास अग्रसारित कर रहा हूँ। इससे पहले 31 अगस्त 09 को भूख से मौत की कथा स्टडी मुख्य सचिव, बिहार सरकार को जमा किया गया है, जिसमें छः कथा स्टडी एवं 3 वर्षों में हुए भूख से मौत का मिडिया से संग्रह किया गया लिस्ट संलग्न था। इस पत्र के साथ रिपोर्ट की प्रति संलग्न है।

सिगमंडी के परसौनी पंचण्ड अन्तर्गत घोसरा गांव में 9 अक्टूबर को भूख से मौत की सूचना महुआ न्यूज पर आया है जिसका तथ्य संकलन जल्द भेज दूंगा।

सधन्यवाद।

भवदीया

(रुपेश)

Office of the Advisor to Commissioner of the Supreme Court [IN THE CASE: PUCL Vs UI and ORS, WRIT PETITION (Civil) NO. 196 of 2001] Koshish, Abdim House, Fraser Road, Patna-800001 Phone: 6415355 Mobile- 9431021035, Email- koshish_pt@yahoo.com
Office of the Supreme Court Commissioners R-38 A Second floor south extension Part II New Delhi! 1100049 Telefax +91 11 41642147 emailcommissioners@vsnl.net
www.supremecourtcommissioners.org

Office of the Advisor to Commissioner of the Supreme Court [IN THE CASE: PUCL Vs UOI and ORS. WRIT PETITION (Civil) NO. 196 of 2001] Koshish, Abdin House, Fraser Road, Patna-800001 Phone: 6415355 Mobile- 9431021035, Email- koshish_pt@of yahoo.com
Office of the Supreme Court Commissioners R-38 A Second floor south extension Part II New Delhi 110049 Telefax +91 11 41642147 emailcommissioners@vsnl.net
www.supremecourtcommissioners.org

(रूपेश)

भवदीया

सधन्यवाद।

न्यूज पर आया है जिसका तथ्य संकलन जल्द भेज देंगा।

सिगमंडो के परसौनी प्रखण्ड अन्तर्गत वीसरा गांव में 9 अक्टूबर को भूख से मौत की सूचना महिआ

पत्र के साथ रिपोर्ट की प्रति संलग्न है।

छ: केश स्टडी एवं 3 वर्षों में हुए भूख से मौत का मिडिया से संग्रह किया गया लिस्ट संलग्न था। इस

पहले 31 अप्रैल 09 को भूख से मौत की केश स्टडी आपके कार्यालय में जमा किया गया है, जिसमें

पर पांच सदस्यीय टीम का गठन किया गया और उसकी रिपोर्ट आपके पास अभिसारित कर रहा हूँ। इससे

खरौना में मुक्ति देवी का भूख से मौत मिडिया द्वारा प्रकाशित एवं महिआ न्यूज पर प्रसारित के आधार

आपका ध्यान आकर्षित करते हुए बताया जा रहा है कि गया जिला के अतरी प्रखण्ड अन्तर्गत टेटुआ टोला

महाशय,

तथ्य संकलन

विषय: मुक्ति देवी (टेटुआ टोला खरौना, पंखण्ड अतरी जिला-गया) का भूख से मौत सूचना के संदर्भ में

पटना, बिहार।

बिहार सरकार

मुख्य सचिव

सेवा में

दिनांक: 16 अक्टूबर 09

पत्रांक: koshish/Adv/SD/13A

Rupesh
Advisor to Commissioner of the Supreme Court
IN THE CASE: PUCL Vs UOI and ORS. WRIT PETITION (Civil) NO. 196 of 2001

रखते काकी मर्ग से चलना प्रारम्भ किया। जहानाबाद एकनार रोड के रास्ते हमलोग आगे बढ़े। था और एक फूसम हुआ था। आगे रास्ता बढ़ा था। पुनः लोनी के सलाह पर इमलीया तक के मसौदाई बाड़ी रोड से बसुनगर के रास्ते जाने लगे। बसुनगर के पूरा कि० मी० पहले पुल क्षतिग्रस्त घट इतवार के बाद भी काम नहीं हटा तो स्थानीय लोगों के सलाह पर हमलोग 5 कि० मी० पीछे गया है अतः आकाशिल गामोण सड़क नाम किचु है। सैकड़ा गाड़ी सड़क पर खड़ी थी। आधा गया मर्ग में जब नदील स्टेशन के पास गजर रहे थे तो पता चला कि एक बन्द का अपहरण हो घटना स्थल के लिए एक प्राइवेट गाड़ी सीमा द्वारा पटना से 11 अक्टूबर 09 को चल दिव। पटना सुप्रिम कोर्ट द्वारा बहाल कम्पेनर के सलाहकार द्वारा गठित पाँच सदस्यीय यह कमीटी प्रातः नौ बजे मर्ग श्री नीतिशा कुमार ने जिला समाहली को इसके जाँच का आदेश दिया है।

मूख से हो गयी है। 11 अक्टूबर 09 के सुबह दैनिक जागरण में खबर आया कि बिहार के मुख्य 10 अक्टूबर प्राइवेट टैली 010 नैनल साधना / महुआ न्यून के द्वारा पता चला कि मर्ति देवी की मौत

जाँच कमीटी खरीना पद्वी

श्री बालिल है। के अन्दर हो चुकी है। जिसमें 6 साल के बच्चे से लेकर 80 साल की रानी देवी जैसी वृद्ध महिला निवासी हरदेव मांझी, गीता देवी, और उनके बच्चे कुल मिलाकर दो दर्जन से अधिक मौत तीन वर्ष गुरुप निवासी 18 वर्षीय नरेशा बिरहौर, पतवास निवासी 35 वर्षीय मर्जु देवी, गुराऊ प्रखंड के कोची निकालकर उसका मांस खान से ही गया था। उसी प्रकार जैसी प्रखंड के 30 वर्षीय विनोद भुइया के मूहनपुर अंचल अन्तगत जाल्ही बाँधिया गांव में 14 लोगों की मौत गाड़ी गया बकरा की है। मर्ति देवी की मूख से हुई मौत काई नई घटना नहीं है। आज से तीन साल पहले गया जिले था। माध में भुइया जैसे अति निर्धन परिवारों की स्थिति आज से बाईं हजार साल पहले जैसे ही जाला है, क्योंकि जिनके यहां गौतम बुद्ध ठहरे थे उसके पास इसके अलावा घर पर पर कुछ भी नहीं पहले गौतम बुद्ध का निर्वाण, मरे हुए जानवर का सड़ा हुआ मांस खा लेने से हुआ था ऐसा कहा है कि फल्य नदी के किनारे विष्णु की नगरी गया में प्रुड दान हेतु आते हैं। आज से बाईं हजार वर्ष नदी के किनारे बुद्ध का बुद्धत्व की प्राप्ति के बाद हुआ। आज भी लाखों लोग अपने पिारों के लक्षण नदियों के किनारे, पहाड़ों के झरने और वनों के कारण हुआ है। बाँध धर्म की स्थापना भी निर्जना से परिपूर्ण यह इलाका प्राकृतिक दृष्टिकोण से हरा-भरा था। यहां के भी संस्कृति का विकास माध प्राचीन काल से ही संस्कृतिक और धार्मिक दृष्टिकोण से काफी महत्वपूर्ण रहा है। धन्य-धन्य

परिहासिक पृष्ठभूमि

1. अखर हुसैन, 15 स्यूनी, पूर्व उपखण्ड, बिहार सरकार, पटना।
2. काऊ, गया, बाँध मर्ति मुक्ति आंदोलन के कार्यकर्ता।
3. जितेन्द्र, पत्रकार, पटना, बिहार।
4. रामलान निराला, बाहं सुखाड़ मुक्ति आंदोलन, सामाजिक कार्यकर्ता, मधुपुर।
5. सिद्धार्थ, खादय सुरक्षा शाखाधी, बैतिया, पश्चिम बंगाल।

सलाहकार के साथ तथ्य संकलन समूह का नाम

घटना स्थल- टोला खरीना-प्रखंड मुख्यालय से लगभग 40 किलोमीटर उत्तर पूर्व की दूरी है। मुख्यालय से लगभग 40 किलोमीटर उत्तर पूर्व की दूरी है।

माध प्रमन्डल गया जिले के अतरी प्रखण्ड अन्तगत टेटुआ टोला खरीना में मर्ति देवी की मूख से हुई मौत (मिडिया द्वारा प्रकाशित सूचना के आधार पर)

मर्ति देवी के मूख से मौत का तथ्य संकलन प्रतिवेदन

- ग्रामीणों का कहना है कि मृति देवी की लाश को लेकर जब हमलोगों ने सड़क जाम किया तो चले गये है। 45 लोगों के पास जूँब काई है लेकिन एक दिन भी नरंगा में काम नहीं मिले।
- 29 परिवार जो पलायन किया है उसमें 84 बच्चे भी माँ-बाप के साथ डेट मेटा पर काम करने इन लोगों को सरकारी सहायता नहीं दी गयी तो इनका भी हाल मृति देवी जैसा हो सकता है। परिवार पलायन कर गया है और उसके बूँदे माँ-बाप घर पर ही है। लोग बताये कि अगर 28 है जिसमें मात्र 14 लोगों को ही वृद्धा पेंशन का लाभ मिलता है। 140 परिवार में से 29 टैटूआ टोला खरौना में कुल लगभग 140 मूँदरों परिवार है जिसमें 65 से उपर वृद्धों की संख्या वाली है। अतः मृति देवी की मौत अनाज के अभाव में ही हो गया।
- है तथा राशन का वितरण राशन दुकानदार नहीं दिया है। हमलोगों की स्थिति भी भूखमरी भूँदरों जालि के महादलित है हमलोगों को भी पिछले जून माह से खेतों में काम नहीं मिल रहा गया। हमलोग अपना पेट कटकर कभी-कभी कुछ दे देते थे लेकिन हमलोग भी भूमिहीन तथा ग्रामीणों ने बताया कि किराए के जाने के एक सप्ताह बाद ही मृति देवी का चूल्हा उपसा हो सकती है।
- कहा गया कि अगर तत्काल अनाज भूँदरों नहीं कराया गया तो कहीं लोगों की जान भी जा जनवितरण प्रणाली से अनाज न मिलने की शिकायत है उसमें भूखमरी का जिक करते हुए यह नाम से दिखाया जिसमें पचासों लोगों के इस्तेफार एवं ठेपा के निशान है उसमें जून माह से मिले। छोटन ने एक आवदन की छाया प्रति 6 अक्टूबर 09 का प्रखण्ड विकास पदाधिकारी के ठीकर लोगों की भीड़ लगी थी। हमलोग सबसे पहले 22 वर्षीय छोटन मांझी, वाई सदस्य से जिला समाहर्ता के अलावे प्रखण्ड विकास पदाधिकारी, थाना प्रभारी, अमला बराहील, मुखिया, हमलोग टैटूआ टोला खरौना में पहुँचे तो उस समय लगभग दिन के 3.30 संख्या बज चुके थे।

गाँव के लोगों की बात

बाहर काम की तलाश में बाहर चले गये है।

बाँध पर अमल नहीं हुआ। परिणाम स्वरूप बड़े पैमाने पर खेतिहर मजदूर राज्य राज्य से मुकत में अनाज तथा 250 रूपये देने की घोषणा की गयी थी तथा नरंगा के तहरने ग्रामीण इलाकों तक अधिकार गाँव के किसानों को नहीं मिला था। 1 कर्जद 25 लाख परिवार को 100 किलो बोज बचाने के लिए रूपये मिले हैं किसानों को देने के लिए सबसिडी भजा वह 20 अगस्त 09 अखबारों के माध्यम से यह कहा है कि 1966-67 से भी भूयकर अकाल की स्थिति है। उन्हीं जो घोषित किया है। जिसमें माध्य प्रमंडल के सभी जिले शामिल है। खुद मुख्य मंत्री निवेश कुमार ने के पानी का संकट ही गया था। अतः 14 अगस्त 09 को बिहार सरकार ने 26 जिले को सूखापत भूमिगत जल अति दोहन के कारण काफी नीचे चला गया था। सभी बापानल सूख रहा था। पीने हुआ था। जाल ही कि माध्य में धान की रोपनी का सही समय 15 जुलाई से 15 अगस्त है। जल नीचे उतरा ही नहीं था अतः धान की रोपनी उस समय तक सिर्फ निजी टैयबल से छिट पेट पाँच जिलों के करीब 12 प्रखण्डों में सभी पोखर, आहर, नाले और पड़न सूखे थे। पहाड़ी से वर्षा दर्ज है। बांध सूखाई मुक्ति आंदोलन के एक सर्वेक्षण टीम के रिपोर्ट के अनुसार 20 अगस्त 09 तक प्रतिशत नवादा में 1.2 प्रतिशत जहानाबाद में 3.8 प्रतिशत तथा अरवल में 3.8 प्रतिशत ही आकड़े प्रमण्डल में नहीं के बराबर हुई है। बिहार आपदा प्रवन्धन के 6 अगस्त 09 के मुताबिक गया में 1.2 निष्पत्ति लक्ष्य से लगभग पचास प्रतिशत से भी कम वर्षा हुई है थी। अतः धान की रोपनी माध्य स्थिति सराय तथा अती मार्ग पर स्थित है। जाल ही कि जून, जुलाई और अगस्त माह में था। यही स्थिति जहानाबाद, नालदा के एकानर, इस्लामपुर तथा हुलासमान गया जिले के कर्जवा, दोनो तरफ खेत परती और बीरान था कहीं-कहीं छिट पेट धान के पौधे खेतों में दिखाई दे रहा

है।

अभाव है। काफी दिक्कत हो रही है। ऐसा सूखा 1966-67 के बाद पहली बार हमलोग झेल रहे हैं। कम धान की खेती हुई है। यही फसल के लिए बीज, खाद्य तथा सिंचाई के लिए पानी का अभी तक हम लोगों का सौदा नहीं हुआ है। ग्रामीणों ने बताया कि इस बार 5 प्रतिशत स्वीकार किया कि बी0पी0एल0 प्रपत्र (क) का आवंटन पिछले दो वर्षों से दिया जा रहा है। लेकिन पी0डी0एल0 टुकान के निरीक्षण के दौरान पंचायत के करीब 50 लोग जूट मयों ग्रामीणों ने यह पंचायत के लोगों से बातचीत

की स्थिति के बारे में नहीं बताया है।

सरज देवी का पुत्र इंदल कुमार ने भी बताया। मुखिया पति ने कहा कि मुझे किसी ने मूर्ति देवी करवाया गया है। टुकानदार ने भी 100 किन्ती अतिरिक्त अनाज का उठवाव कभी नहीं किया है। यह टुकानदार को अतिरिक्त दिया गया है। यह मुझे मालूम नहीं है न इस प्रकार के आदेश से अवगत मुखिया सूझा देवी के पति राजेश पासवान बताया कि 100 किन्ती का अनाज प्रत्येक राशन

मुखिया से मुलाकात

आनन-फानन में 11 अक्टूबर 09 की सुबह से अनाज बांटना शुरू किया।

बांट सकें। जबकि ग्रामीणों का कहना है कि जिना समाहर्ता के आने के पूर्वना के बाद है। पिछले माह का अन्तीदय योजना का अनाज हम नहीं मिले। जिसके कारण हम अनाज नहीं 28 अन्तीदय योजना के लाभार्थी खरौना टोला में है और 32 लाल काले धारी बी0पी0एल0 सूची में जुलाई अगस्त 09 का प्राप्त हुआ है और 9 अक्टूबर 09 से अनाज बांट रहा है। उसने कहा कि पी.डी.एस. टुकानदार सरज देवी पुत्र इंदल कुमार ने कहा कि 8 अक्टूबर 09 को हमें आवंटन जमान

पी0डी0एल0 टुकानदार से बात-चीत

कपय तथा दस हजार कपय दिया।

- किशोरी मांझी ने स्वीकार किया कि माँ के अत्यधिक के लिए बिक्रम प्रखंड पदाधिकारी ने 1500 टुकानदार भी स्वीकार किया है। जुलाई 09 से कृपन सादा है जिसका छाया प्रति संलग्न है।
- साल का कृपन नवम्बर 08 से जून 09 तक का पी0डी0एल0 टुकानदार ले लिया इस बात को मूर्ति देवी का नाम बी0पी0एल0 सूची में है। सालों भर का कृपन सादा था लेकिन अभी पिछले से भी इन्हें नहीं जोड़ा गया।
- मूर्ति देवी अड्ड्या जाति की महादलित मूँमहीन परिवार से आती है। इसके पास रहने के अलावा जमीन नहीं है। इसके पति का देहान्त एक वर्ष पहले ही हो गया। अतः लक्ष्मीबाई प्रधान योजना

- मूर्ति देवी का डकलौला बेटा किशोरी ने बताया कि जून, जुलाई में तीन किन्ती में दोनो पति-पत्नी के लिए पाँच हजार कपया दादनी के तौर पर एडवॉसट्ट डेट अठ्ठा का मालिक के ठीकदार द्वारा दिया गया था जो अगस्त माह में खत्म हो गया। एक महीने पहले माँ के लिए तीन किन्ती बावल रखकर डेट अठ्ठा बला गया था। मृत्यु का समाचार मिलने पर परिवार को आया है।
- मूर्ति देवी का डकलौला बेटा किशोरी ने बताया कि जून, जुलाई में तीन किन्ती में दोनो पति-पत्नी के लिए पाँच हजार कपया दादनी के तौर पर एडवॉसट्ट डेट अठ्ठा का मालिक के ठीकदार द्वारा दिया गया था जो अगस्त माह में खत्म हो गया। एक महीने पहले माँ के लिए तीन किन्ती बावल रखकर डेट अठ्ठा बला गया था। मृत्यु का समाचार मिलने पर परिवार को आया है।

- मूर्ति देवी के घर का मूआयना किया गया। झण्डा नुमा घर पुआल की खाली मिट्टी की अनाज डाल दिया है। वृद्धा को भी निषा दिया गया था जिससे कि साक्ष्य को सिटया जा एक खाली या लेकिन दसरा कोठी में पी0डी0एल0 की टुकानदार ने जबरन आज कोठी में दिवाल जो एक तरफ गौर चुका है। दो कोठी, मिट्टी का अनाज रखने का बड़ा बर्तन जिसमें मूर्ति देवी के घर का मूआयना किया गया। झण्डा नुमा घर पुआल की खाली मिट्टी की

मूर्ति देवी का आर्थिक समाजिक हालात

साक्ष्य सिटया जा सकें।

प्राथमिकी दर्ज किसे जबरन लाला की जलवा दिया गया ताकि पोस्टमाटम नहीं होने के पहले

मर्यादित योजना योजना

प्रयत्न सिद्धि पूरे बस्ती में पात्र सरकारी बाणकल है ।

प्राथमिक स्वास्थ्य केंद्र इस गाँव में प्राथमिक स्वास्थ्य केंद्र की सिद्धि नहीं है। यहाँ के लोगों को अपना इलाज कराने प्रयत्न स्थित प्रयत्न अस्पताल में जाना पड़ता है। गाँव वालों का आरोप है कि प्रयत्न अस्पताल में उनकी कोई भी सरकारी सिद्धि नहीं मिलती है। गाँव भी बाहर करानी पड़ती है तथा दवा भी बाजार से खरीदना पड़ता है। इस कारण कई झोला छाप डॉक्टर इनका आर्थिक शोषण करते हैं।

अपना मूर्ति देवी के परिवार का कोई भी सदस्य शारीरिक रूप से विकलांग नहीं है।

जानी सरक्षा योजना इस योजना का नाम कई परिवार ने लिया है और इसकी जानकारी है।

समिकित्त बाल-विकास योजना, आंगनवाड़ी केंद्र इस प्रयाय में 12000 की जनसंख्या है जिसमें 6 आंगनवाड़ी केंद्र है। जिसकी स्थिति बहुत ही खराब है। इस बस्ती में एक भी आंगनवाड़ी केंद्र नहीं है। आंगनवाड़ी केंद्र नहीं होने के कारण सभी भईया (महा दलित) परिवार के बच्चे आंगनवाड़ी केंद्र में जाने से वंचित रह जाते हैं। और ये सभी कुपोषित हैं। इस प्रयाय के मुखिया पति एवं संबंधित बार्ड सदस्य को मिनी आंगन बाड़ी केंद्र की अवधारणा के बारे में विचार पता नहीं है।

राष्ट्रीय वृद्धा पेंशन योजना विधवा मूर्ति देवी के परिवार के किसी भी सदस्य को वृद्धा पेंशन योजना का लाभ नहीं मिलता है।

राष्ट्रीय ग्रामीण रोजगार गारंटी योजना गाँव काई है परन्तु सभी सादा है। इन्हें आज तक एक दिन भी काम नहीं मिला है। मूर्ति देवी के परिवार के पास गाँव काई नहीं है। 140 भईया परिवार के इस बस्ती में 45 लोगों को नाम से आवास नहीं आया है।

इन्दिरा आवास योजना मूर्ति देवी को इन्दिरा आवास योजना के तहत आवास नहीं मिला है। किशोर मांझी कहते हैं कि मैं जब भी इन्दिरा आवास के लिए मुखिया के पास गया हूँ तो मुखिया जी कहते हैं कि अभी पुन्हारे नाम से आवास नहीं आया है।

इस योजना के तहत मूर्ति देवी के परिवार को उस वक्त के तात्कालिक रूप से प्रयत्न विकास पदाधिकारी के द्वारा परिवार के सदस्यों को भूख से मरने पर 10,000 रु दिया गया। अन्तर्गत के लिए क्वोर अन्तर्गत योजना के तहत 1500 रूपय दिया गया। परन्तु सही से बी पी एल परिवार को इस योजना का लाभ नहीं मिल पाता है।

• फ़िट मिडिया और इंटरैक्टिव मिडिया में खबर आने के बाद मुख्यमंत्री ने जिला अधिकारी को जांच करने का आदेश जारी किया। जो कहीं से भी न्याय संगत नहीं है। क्योंकि संप्रिम

संज्ञा

9. उचित नामधेयों वंचित रह जाते हैं।
ग्राम सभा फर्जी हो रहा है जिसके करण पंचायत राज की कल्याणकारी योजनाओं से पीड़ित तथा बेहतर सुखा हुआ दिख रहा था।
बाड़ी नहीं है। अतः अधिकारों बचने की दिशा में दिख रहे थे। महिलाएं भी एनिसिया से
8. टैटूआ टोला खरीना कि 700 की आबादी पर एक भी आंगन बाड़ी या मिनी आंगन होती है।
जबरन लाया को जलवा देना भी सब पर पदा जलने के लिए कि गई कथवाही प्रतीत करीर अत्यधिक योजना से 1500 रुपये उपलब्ध कराकर, 10 अक्टूबर 09 को देकर ग्रामीणों द्वारा सहक नाम के बावजूद प्राथमिकी दर्ज नहीं करना और आंगन-फांगन में कथवाही दिखती है।
7. ग्रामीणों का एक बार 100 किलो अनाज देना साक्ष्य को मिटाने के लिए कि गई महीने और घर की लिपार्ड-पोल्ड भी साक्ष्य को मिटाने तथा आंगन-फांगन में प्रतीत होती है।
6. उसकी स्वभाविक मौल हुई बलाना "मनगंत" और अपने बचपन में गरी गई कहानी जिला अधिकारी द्वारा कहा गया कथन दीवाल लिपने के दौरान लिपने के कारण और खाद्य सुरक्षा के अभाव में हो गई ऐसा प्रतीत होता है।
तो उसे देखने वाला कोई नहीं था। अतः उसकी मौल 8 अक्टूबर के रानी में कीर्षण चलने के लयक रही होगी। जब कीर्षण के हिकार होकर चलने से लाचार हो गई उठा ही गया और मूर्ति देवी माना कर अपना पट तब तक मर्ती रही जब-तक वह ग्रामीणों का कथन सही प्रतीत होता है कि एक सप्ताह के बाद मूर्ति देवी का चुन्दा मूर्ति देवी के पुत्र के द्वारा एक एक महीना पहले मान लीन किलो अनाज दिया गया।
5. मूर्ति देवी को अन्तीदय योजना से भी नाम नहीं दिया गया।
4. मूर्ति देवी का नाम बी0पी0एल0 सूची में होने के बावजूद उसे अनाज नहीं मिला।
3. और उपर से निगरानी नहीं होने के कारण उपरोक्त नाम नहीं मिला।
2. मूर्ति देवी को लक्ष्मीवाड़ी प्रेक्षन योजना का नाम हलका कर्मचारी द्वारा जोड़े जाने और उपर से निगरानी नहीं होने के कारण उपरोक्त नाम नहीं मिला।
1. मूर्ति देवी का नाम बी0पी0एल0 सूची में होने के बावजूद उसे अनाज नहीं मिला।

निष्कर्ष

उपरोक्त साक्ष्यों के आधार पर टीम निम्नलिखित निष्कर्षों पर आया है कि.....

महादलित परिवार खाद्य सुरक्षा योजना का नाम लेने से पूर्णतया वंचित है।
पदाधिकारी को दि या था। लेकिन आज तक कोई भी कार्रवाई नहीं होने की वजह से आर्थिक अपना नाम बी पी एल श्रेणी में जोड़ने के लिए 2007 में ही प्रपत्र क भर कर प्रखण्ड विकास 140 मूडया परिवार के इस बस्ती में 60 लोगों को नाम बी पी एल श्रेणी में है। शेष परिवारों ने गारिबी रेखा में नाम

खराब है।
होगा और पहचानने के लिए कपड़ा होगा तभी बचने स्कूल जा सकते हैं अभी तो घर की स्थिति योजना का नाम नहीं उठा पाते हैं। किशोर कहते हैं कि जब बच्चों को घर में खाने के लिए पैसा नहीं जाते हैं। बस्ती के अधिकारों बच्चों को स्कूल नहीं जाने के कारण ये बच्चे मरणांत्य जीवन से डरते हैं कि मर्ती देवी पर नदी के उस पार स्कूल है। इनके परिवार के बच्चे स्कूल

प्रवायन में नियमानुक्रमण समझ करवाना सुनिश्चित किया जाना चाहिए।
गम समा

इस बस्ती से 28 परिवार योजना के लिए परदेश चल गये हैं।
राष्ट्रीय ग्रीष्म योजना गारंटी योजना

आने वाले जनवरी माह के बाद पीन के पानी का संकट बढ़ सकता है। अतः पोखर, नाला, आहर और पड़न की सफाई कर वर्षा जल को संग्रह करने का उपाय जो पहले से मौजूद था लेकिन वह खराब हो गया। उन्हें पूनः बहाल कर रखा जा सके। ग्रीष्म जल के सतत जल प्रणाली की स्थापना के लिए राष्ट्रीय ग्रीष्म योजना गारंटी योजना की सहायता ली जाय।
प्रयत्न सिद्ध

इस योजना के अन्तर्गत लाभार्थी का सूची, प्रशिक्षण सूची और सूची तैयार का मापदण्ड को प्रवायन अथवा सांख्यिक स्थलों के क्षेत्र पर लिखा जाना चाहिए।
इन्दिरा आवास योजना

इस योजना की जानकारी सभी ग्रीष्मों को नहीं है। इसका प्रचार प्रसार करने की जरूरत है।
राष्ट्रीय परिवार लाभ योजना

- की अर्द्ध घण्टा 55 वर्ष किया जाय।
- महा दलितों की औसत आय अन्य वर्गों से अत्यन्त निम्न होने के कारण इनके लिए प्रदान
- लाभार्थी सूची गम समा में बनाया जाय एवं इस पर कड़ी निगरानी रखी जाय।
- आवेदन प्रपत्र का निर्यातन सर्वोच्च प्रथमिकता पर की जाय।
- अक्षरसह पालन करवाने के लिए समर्पित व्यवस्था सुनिश्चित किया जाय। महादलितों द्वारा सभी कुकरानों पर लगाने का आदेश देना चाहिए और लगाने का आदेश का भी जन विवरण प्रणाली के कुकरान पर इसकी जानकारी तक नहीं है। इस आदेश का जोड़
- इस संदर्भ में मानवीय सर्वोच्च न्यायालय के आदेश कड़ी प्रदर्शन नहीं किया गया है। किसी की ठीक करने की जरूरत है।
- गया में लगातार भूख से मौत की खबर आ रही है। राशन की शिकायत लगातार सभी जाह है। राशन आने व बांटने की नियमित सूचना भी नहीं रहती है। इस अनियमितता

जन विवरण प्रणाली

- स्थान्य विभाग एवं आंगन केंद्र द्वारा जांच करके सही स्थिति का पता लगाना चाहिए कि कितने बच्चे कुपोषण के शिकार हैं तथा कितनी महिलाएं एनिसिया जैसे घातक बिमारी से ग्रसित हैं। एवं विशेष अभियान चलाने के लिए कर्मियों से मुक्ति किया जाय।
- स्वास्थ्य विभाग एवं आंगन केंद्र द्वारा जांच करके सही स्थिति का पता लगाना चाहिए कि है।
- है। दैनिक जागरण के अनुसार खुद मुख्य मंत्री ने जिला समाहर्ता को जांच का आदेश मौत कि खबर आ चुकी है। जिसमें 40 से अधिक मौत में कोर्ट एफीडेन्ट साक्ष्य दिया गया है। अब तक के रिपोर्ट के अनुसार पिछले तीन वर्षों में 100 से ज्यादा लोगों की भूख से करवाने पर ही निष्पत्ती की गारंटी है। इससे निष्पत्ती जांच हो सकती गले में कर्पा फटा लगायेगा। इस जांच को किसी अवकाश प्राप्त न्याय विद् से जांच राज्य सचिव मुख्य रूप से जिम्मेवार होंगे। अतः जो खुद अभियुक्त हो सकता है। वह अपने में मुखिया, प्रखंड में प्रखंड विकास पदाधिकारी, जिला में जिला पदाधिकारी तथा राज्य में कोर्ट के आदेश के अनुसार अगर किसी की भूख से मौत होती है। तो उसके लिए प्रवायन

जॉचकर्ताओ का हस्ताक्षर

ग्राम-खैरोना

पलायन व्यक्ति की सूची (ईट भट्टा)

कमाक सं०	नाम/पति/ पत्नी	लड़का की संख्या	लड़की की संख्या
1	मुन्ना मांझी	02	01
2	सुबोध मांझी	01	01
3	पेरू मांझी	00	01
4	चमन मांझी	02	03
5	योगेन्द्र मांझी	03	05
6	कुजबिहारी मांझी	01	01
7	निर्मल मांझी	00	00
8	उपेन्द्र मांझी	00	00
9	अनील मांझी	02	02
10	चन्द्रदेव मांझी	02	02
11	नागेश्वर मांझी	00	01
12	दिनेश मांझी	01	03
13	बुटा मांझी	02	02
14	नंदलाल मांझी	01	01
15	सितल मांझी-01	02	01
16	नरेश मांझी	01	03
17	बिगन मांझी	01	01
18	भजन मांझी	00	02
19	चन्दीरक मांझी	01	02
20	टूटुनी मांझी	01	00
21	शिवजी मांझी	00	01
22	नगीना मांझी	02	01
23	विमल मांझी	02	01
24	सरयुग मांझी	03	01
25	डोमन मांझी	02	03
26	सत्येन्द्र मांझी	00	02
27	चलितर मांझी	00	00
28	किशोरी मांझी	02	01
29	जयहिंद मांझी	03	01
30	रमेश मांझी	03	01
	टोटल	40	44

Letter on WHO 2006 Growth Standards, by Marko Kerac and Andrew Seal

This new 2006 WHO Growth standards: What will they mean for emergency nutrition programmes?

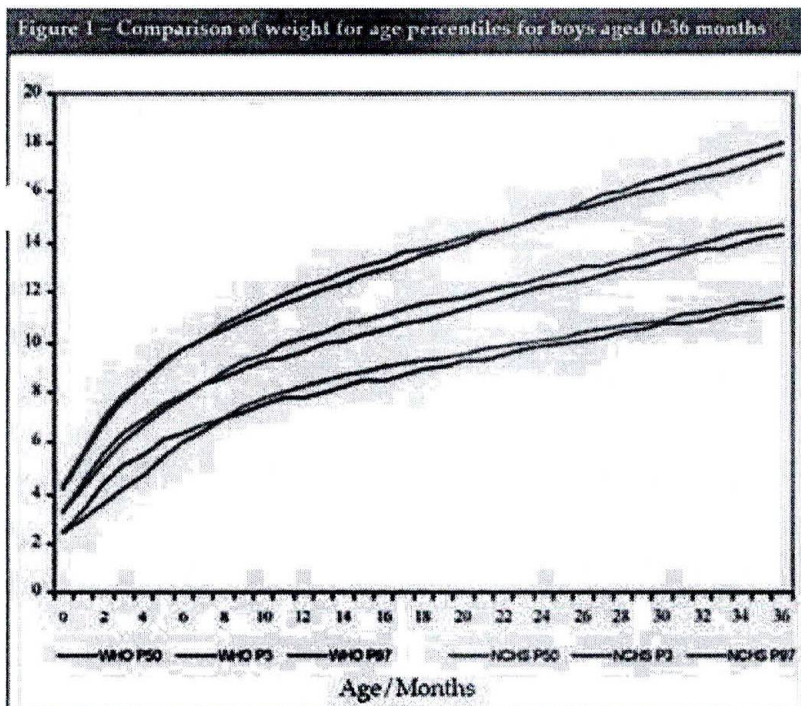
Dear Editor

Whilst welcoming the principles which have driven the development of the new 2006 WHO growth standards (see news piece this page), we wish to draw attention to important practical implications for emergency nutrition programmes. We think it is important that these are explored and discussed in detail before the new standards are implemented in operational settings.

The need for new growth standards

An internationally valid, 'gold standard' range against which child growth can be assessed has long been needed. There are several reasons why the previous NCHS (National Centre for Health Statistics)/ WHO Reference data fell short of this ideal:

1. It was constructed on a cohort of North American children, from a single community and a single ethnic group of European ancestry.
2. Data was gathered from 1929- 1975, a long period during which nutrition varied greatly. The main issue of concern was that infants were pre-dominantly bottle-fed rather than breastfed, as is considered ideal today.
3. Statistical methods have advanced significantly since the original NCHS/WHO growth curves were constructed in the 1970's. Applying better statistical techniques to the same dataset was what led to the CDC 2000 growth references.
4. Increasing numbers of studies in both developed and developing country settings found that apparently healthy, breastfed children were being labelled as abnormal according to the NCHS/WHO References.



MGRS (Multi-centre Growth Reference Study)

The MGRS¹ ran from 1997-2003 and was explicitly designed to generate a growth standard to show how children should grow, rather than just a reference that allows comparison. Following extensive screening to

select only those children free of health or environmental (socio-economic/ nutritional) constraints to growth, a total of 8,440 children were observed at six international sites (Brazil, Ghana, India, Oman, Norway, USA). The study had two components: longitudinal work followed children from birth to 24 months; a cross-sectional study observed children from 18-71 months. State-of-the-art statistical techniques were chosen to construct growth curves from this data. Key outcomes from the MGRS are:

1. The strongest evidence yet that a single international child growth standard is valid. Free of environmental and nutritional constraints, children of very different ethnic groups all grew the same: only 3% of length variance was due to inter-site differences.
2. New z-score and percentile reference charts/tables for weight-for-age, length/height-for-age, and weight-for-length/height.
3. Additional standards not present in NCHS/WHO Reference: Body Mass Index (BMI); Mid upper arm circumference (MUAC); skin-fold thickness; and motor developmental milestones.
4. A devoted website with extensive literature relating to MGRS and the new standards.
5. Free downloadable software which may, in the future, enable both individual and population anthropometric status to be calculated using either NCHS/WHO Reference or WHO Standard data.

Differences between the old and new growth curves

There are important differences between the old references and the new standards. There is however no easy or consistent way of transforming anthropometric measures between the two: the growth lines do not run in parallel with simple shifts up or down. Factors affecting the magnitude and direction of differences between old and new cut-offs include: a child's age; a child's length/height; which measure (i.e. WHZ; WAZ or HAZ) is being considered; whether the child under consideration is above or below median; and whether the z-score or % of median is being considered. As an example, shown below are the weight-for-age percentile lines (P) for boys between 0 and 36 months. The curves cross, sometimes more than once, illustrating that the magnitude and direction of the difference between the NCHS/WHO Reference and the WHO Standards is dependent on the age of the children and his location on the distribution.

In short, the net effect of the new standards on the measurement and diagnosis of growth and malnutrition is complex!

Implications for emergency nutrition assessments and feeding programmes

Comparability and interpretation of nutrition data

Interpreting trends in nutritional status and setting agreed thresholds for action are important for emergency nutrition programmes. With the adoption of the new WHO standards the ability to easily compare the results of current surveys with previous data will be lost, and this will make new data more difficult to interpret.

This problem could be overcome by allowing for a period of dual-analysis of survey data. If results from surveys are analysed using both the new WHO Standards and the currently used NCHS/WHO Reference, then sufficient data and experience may be built up with the new system whilst assuring 'backwards compatibility'. Though potentially complex and confusing for non-specialist policy-makers, this approach would eventually enable trend and risk models to be recalibrated and appropriate new action thresholds set. However, a note of caution must be added. Although software is available from the WHO web site that can be used to analyse surveys (WHO Anthro 2005), at the moment it does not deal with cases of oedema in the standard way, making calculation of the correct estimates of Global Acute Malnutrition (GAM) and Severe Acute Malnutrition (SAM) difficult.

2. Prevalence assessments using z-scores

Weight-for-length/height is a key anthropometric measure for emergency feeding, widely used in malnutrition prevalence surveys to assess the need for, or effect of, a nutrition programme. It is therefore important to know what are the expected effects of the WHO Standards on the measured prevalence of GAM and SAM.

. *Effect on SAM ~ a marked increase*

Overall, the new WHO standards will increase the measured prevalence of SAM through increasing the value of the weight for height <-3 z-scores cut-off. The difference is maximal (1kg) for infants with lengths around 60 cm. As length increases, this difference narrows and from 76.5- 86cm length, the NCHS/WHO Reference cut-off is temporarily higher by about 0.2 kg. With yet further height increase, the WHO Standard cut-off again becomes greater. There is a second peak difference of 0.6 kg for children above 100 cm.

. *Effect on GAM ~ small but unpredictable*

For GAM the weight for height cut-off is <- 2 z-scores. The pattern of differences for -2 z-score follows that for -3 z-scores but, due to their different magnitudes, may lead to an increase or decrease in prevalence depending on the height profile of the surveyed populations and the relative contribution of SAM to GAM.

3. Feeding programme enrolment and discharge

. *Feeding programme enrolment if using % of median*

The percentage of the median has long been the de facto field measurement for the admission of children to selective feeding programmes (therapeutic for SAM; supplementary for moderate acute malnutrition). As yet, WHO do not provide % of the median tables for use with the new Growth Standards. However, if these are tabulated something unexpected is observed. Paradoxically, in contrast to what we saw with z-scores, when the new standards are applied in percentage of the median measurements, there is an overall decrease in the cut-offs for acute malnutrition. This would therefore lead to a decrease in the numbers of children eligible for selective feeding. Both the 70% and 80% curve follow the same pattern.

. *Feeding programme discharges if using % of median*

Discharge from selective feeding programmes typically takes place when patients achieve 80 or 85% of their median weight for height. With application of the WHO Standards, these cut-offs will be reached at a lighter weight so children will, on average, be discharged earlier. The effects of this change on relapse, re-admission or case fatality rates are currently unknown.

. *Feeding programme enrolment if using z-scores*

If agencies move to using z-scores based on the WHO Standards as entry criteria for selective feeding programmes what changes in admissions can be expected? We mentioned above that the -3 z-score cut-offs have increased with the new standards meaning that more children will be diagnosed as severely malnourished and therefore eligible for admission to therapeutic feeding. To assess what magnitude of difference this could entail we looked at historical data from 3 refugee operations in Africa and Asia. The numbers of children eligible for admission to therapeutic feeding increased by between 500 and 600%². If programmes plan to use the new WHO Standard z-score cut-offs they may need to plan for at least a 5 fold increase in patient load.

. *Feeding programme discharges if using z-scores*

If patients are discharged at -2 z-scores then the impact on average treatment duration in any programme will be variable, depending on the particular height profile of the population. Conclusions The new WHO standards represent significant theoretical advantages over the old NCHS/WHO growth references. However, their introduction poses a number of potentially serious operational challenges, which, in the opinion of the authors, have not yet been adequately discussed or addressed.

In emergency settings, the likely effect is a great increase in the diagnosis of SAM, and a possible increase in GAM - if assessed by <-3 and <-2 Z-scores respectively. This might be seen as a great opportunity to enrol more children in therapeutic feeding programmes (TFPs). However, if this line is pursued the funding implications and possible diversion of resources away from food security, livelihoods, and other public health interventions need careful consideration.

There is however another, perhaps more serious possibility: if % of median remains the field programme admission criteria, significantly less children might be admitted to programmes. This risks confusion between different programmes, misallocation of resources, and potentially harmful impacts on clinical care and public health outcomes. It is crucial that operational agencies work to achieve a consensus on the way ahead.

Recommendations

We believe that the new WHO standards represent both great opportunities but also great challenges for emergency nutrition. They should not be implemented in haste. We call for a body comprising UN and NGO implementing agencies to be rapidly established to coordinate a response to this operational challenge.

Sincerely,

Marko Kerac, Valid International and College of Medicine, Blantyre, Malawi, and Andrew Seal, Institute of Child Health, London, UK

¹www.who.int/childgrowth/en/

²unpublished data

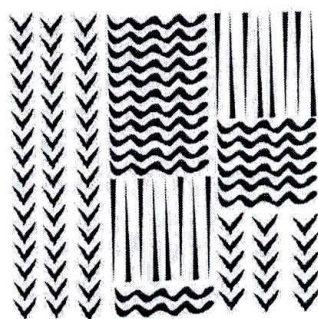
DRAFT PAPER

PANCHAYAT LEVEL DATA BASES:
A WEST BENGAL CASE STUDY

Aparajita Bakshi Indian Statistical Institute
Jun-ichi Okabe Yokohama National University

STUDYING VILLAGE ECONOMIES IN INDIA
A COLLOQUIUM ON METHODOLOGY

December 21 to 24, 2008



PANCHAYAT LEVEL DATA BASES: A WEST BENGAL CASE STUDY

Aparajita Bakshi, Indian Statistical Institute
Jun-ichi Okabe, Yokohama National University

1. INTRODUCTION

This paper studies the overall status of data available at a gram panchayat in West Bengal. The purpose of this study is to assess the potential of the gram panchayat database as an instrument for planning and policy implementation.

Under the system of centralised planning, there was little development of local-level databases in India. However, the need for decentralised databases at the village level has been felt for some years. The success of the panchayat system in decentralised planning in West Bengal and subsequently the 73rd and 74th Amendments to the Constitution of India necessitated the development of databases systematically from below. In 2001 the National Statistical Commission of India recommended that a Committee of Experts be constituted to review the record with respect to basic statistics for local-level development and suggest a minimum list of variables on which data need to be collected at the local level.¹ As a result, the High Level Expert Committee on Basic Statistics for Local Level Development was established to consider different aspects of the problems of databases for local level development.²

The focus of the High Level Expert Committee has not been quite the same as that of the National Statistical Commission. The National Statistical Commission focussed on *block* level statistical organization as key to the construction of local-level databases, whereas the High Level Expert Committee has focussed on *villages* in the course of its pilot studies. The Committee recommended that the gram panchayat should consolidate, maintain and own village-level data. Indeed, a village is the very first stage of collection and recording of data, and village-level data are at the very root of statistical system in rural India. This study of panchayat-level data has been stimulated by this perspective of the High Level Expert Committee.

¹ National Statistical Commission (2001), para 9.2.22 and 2.7.8.

² Government of India (2006).

There is no standardised system for collection of local level data in India. Large scale sample surveys do not fulfill the data requirements for local level planning since such surveys usually provide estimates at the national and State levels. Thus, according to the National Statistical Commission (2001), “there should be a set of core variables/indicators on which statistical data should be compiled and aggregated at appropriate levels, analysed and published at regular intervals of time. The sources of this data could be both the decadal population census and administrative records of the Government Departments. Further, additional data requirements for local level planning specific to local area also should be looked into and the local bodies should be given a free hand in deciding their data requirements, which otherwise could not be met through the standardised system” (para 9.2.21).

In order to assess the potential of the panchayat-level data base, we took up a relatively advanced gram panchayat and review the overall set up of its statistical system. Our study is limited to a single gram panchayat since the total statistical system of the panchayat raj institutions is too complicated to be examined in detail here. We visited the Raina gram panchayat and conducted interviews with panchayat members and officials on their administrative set up and collected various data used for their governance. We checked actual documents and records there. We visited Bidyanidhi village in the jurisdiction of this panchayat to assess actual records collected and available at the village level. We identified the main data sources available at the gram panchayat and below for local-level planning and its implementation.

2. PROFILE OF THE RAINA GRAM PANCHAYAT AND THE BIDYANIDHI VILLAGE

We selected Raina gram panchayat in Barddhaman District in West Bengal for our study. Barddhaman District is a region of relatively high incomes and literacy in the State. In 2005, the Human Development Research and Coordination Centre, Development and Planning Department, Government of West Bengal carried out a study on ‘Landlessness and debt in rural West Bengal’.³ As part of the study, census type surveys were undertaken in seven villages in different agro-climatic regions of the State in May-June

³ The study was directed by V. K. Ramachandran and Vikas Rawal.

2005. Subsequently, one of us was involved in detailed surveys on various aspects of incomes and employment in three of the seven villages the following year. Bidyanidhi in Raina gram panchayat was one of the villages that were studied. Raina gram panchayat was specifically chosen for this study since our previous experience suggested that this panchayat was more efficient and successful in implementing different development programmes compared to the other village that were studied in 2005-06.

Household level data collected in the 2005 and 2005-06 surveys were available to us. This enabled us to assess the quality of some of the data available at the gram panchayat, based on comparisons with the survey data.

2.1 Profile of Raina gram panchayat

Raina gram panchayat in Raina I Block is situated in the South Eastern part of Barddhaman District. Raina gram panchayat consists of 13 mouzas⁴ covering a geographical area of 20.8 square kilometers. The total population of Raina gram panchayat is 14967 (Census of India 2001) of which, 35.2 per cent are Scheduled Caste households and 4.5 per cent are Scheduled Tribe households. The literacy rate in this panchayat is 75 per cent, which is higher than the average literacy rate in West Bengal.

The panchayat office is situated in Rayna mouza, which is also the Block headquarters. Rayna is 25 kilometres from the district town Barddhaman and is well connected to the town by road. The nearest railway station is also Barddhaman. There are 10 primary schools, one secondary school and one higher secondary school in the gram panchayat. There is one Primary Health Centre and two sub-centres.

Barddhaman district is one of the most agriculturally advanced districts in the State and leads in the production of rice and potato, the two main crops of West Bengal. Bound by the Damodar River on the east, Raina is an agriculturally advanced area. According to the Census of India 2001, 79.3 per cent of the geographical area of Raina gram panchayat is agricultural land, of which 95.6 per cent is irrigated. The main sources of irrigation are canals and tubewells. Mainly three crops are grown in the year in this region. The main crop is Aman (monsoon) paddy (July to October), which is mainly rainfed. In the

⁴ The mouzas under Raina GP are, Pipila, Ibidpur, Fatepur, Bidyanidhi, Hakrishnapur, Bokra, Birampur, Rayna, Raynagar, Jot Rajaram, Bishwesharbat, Maheshbati.

irrigated tracts, a second crop of potato or oilseeds are grown in winter or a short duration paddy is grown in summer. Since there is some overlap in time in the winter and summer crops, either of the two crops is grown in a single plot. A high value aromatic variety of paddy (Gobindo-bhog) is grown in the region during the Aman season.

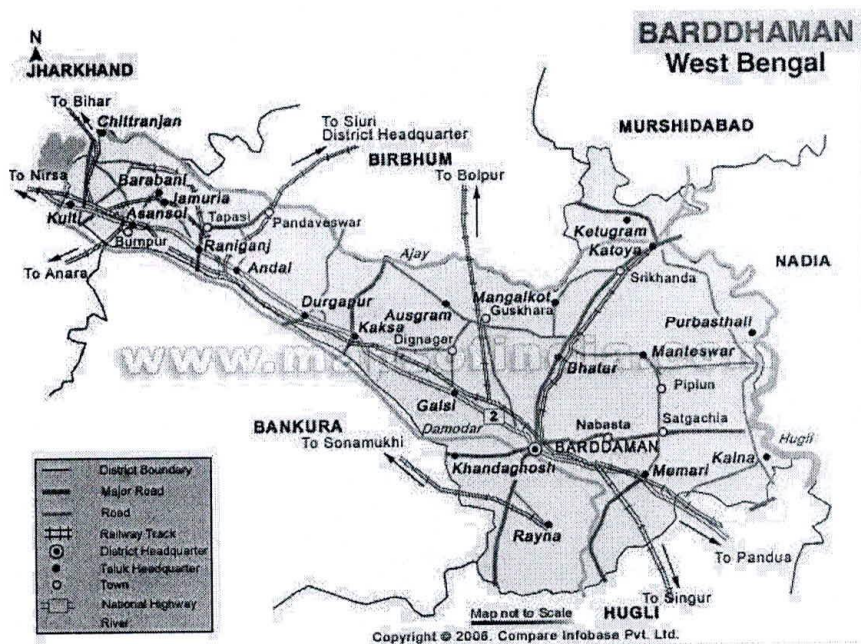
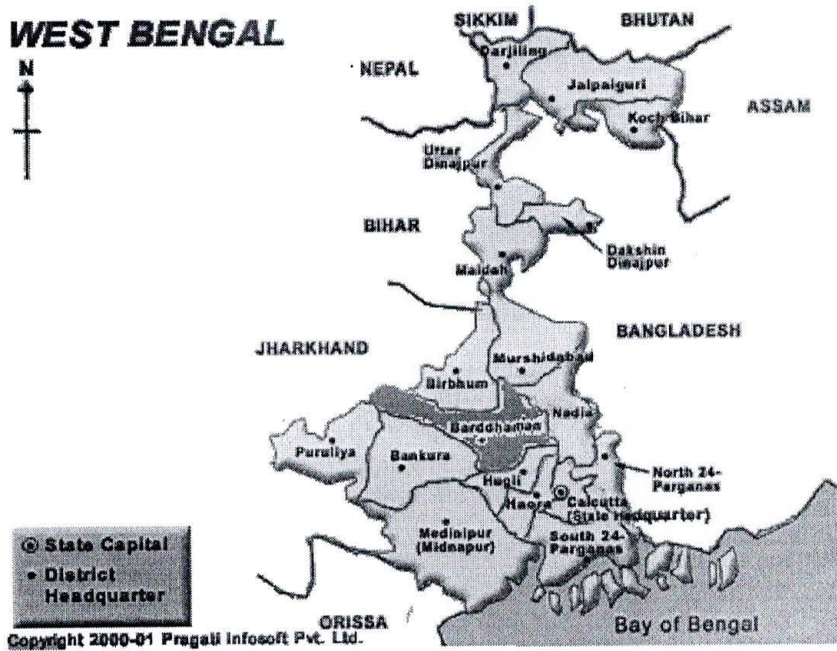


Table 1 *Profile of Raina gram panchayat, 2001*

Total population		14967
Geographical area (in sq km)		20.8
Scheduled Castes (as percentage of total population)		35.2
Scheduled Tribes (as percentage of total population)		4.5
Literacy rate (7 years and above)	Person	74.6
	Male	83.2
	Female	65.5
Work participation rate	Person	35.2
(Proportion of workers in total population)	Male	57.3
	Female	12.1
Cultivators (as percentage of total workers)		15.0
Agricultural labourers (as percentage of total workers)		47.0
Household industry (as percentage of total workers)		3.5
Other workers (as percentage of total workers)		34.6
Agricultural land (in hectares)		1650
Irrigated area as percentage of agricultural land		95.6

Source: Census of India 2001.

The Raina gram panchayat consists of 12 sansads (rural wards). Eight of the sansad seats in the present term (2008-2013) are held by Communist Party of India (Marxist) and four by the All India Trinamul Congress. The panchayat Pradhan is Madhabilata Dhara, a Dalit woman.

2.2 Profile of Bidyanidhi Village

Bidyanidhi is situated about four km from Raina panchayat office. The village is two km off the main road that connects Rayna to the district town Barddhaman and is connected to the main road by an all-weather road.

The population of Bidyanidhi was 669 in 2001, and total geographical area is 1.35 sq km. Dalit households constitute 48.6 percent of the population in Bidyanidhi. There are no Adivasi households in the village. According to the survey data, the households resident in Bidyanidhi owned 60 ha. Of the total ownership holdings, 84 per cent is irrigated. The actual area that is irrigated in any year is however lower because the main source of irrigation a deep tubewell and only half of the total command area of the deep tubewell

can be irrigated in a year.⁵ Thus the irrigated plots receive water every alternate year. A small proportion of land is also irrigated from tanks.

There is one pre-school child education centre (Shishu Siksha Kendra) and Integrated Child Development Services (ICDS) centre and one primary school in Bidyanidhi. During our visit to the village, the total enrollment in the Shishu Siksha Kendra (children in the age group of 3 to 6 years) was 22 and the number children registered at the ICDS centre (in the age group of 0 to 6 years) was 60. The total number of children enrolled in the primary school was 40. The primary school had two class rooms and two teachers.

There are eight functioning self-help groups in the village. One of the self-help groups is a men's group while the remaining are women's groups.

3. DATA BASES AVAILABLE AT THE GRAM PANCHAYAT

Prior to our field investigation, we collected some information from the Strengthening Rural Decentralisation (SRD) Cell of the Panchayats and Rural Development Department on the type of data that are generally available at the gram panchayats. We obtained the following list:

1. Census of India village-level data, in electronic form and in hard copy.
2. Household-wise data from the Rural Household Survey (RHS), in electronic form and in hard copy. Data were collected for each household on 12 out of the 13 indicators suggested by the Government of India.
3. Data available in the Self-Evaluation Format. In order to evaluate the functioning of the gram Panchayats and also to provide incentives to the gram panchayats to improve their administration, the West Bengal Panchayats and Rural Development Department have started providing a Self-Evaluation Format to each gram panchayat since 2006-07. In this format the panchayats have to evaluate and assign scores for the different indicators specified in the format. Panchayats receive financial incentives from the State government based on this evaluation. The format deals with two sets of indicators, a)

⁵ The command area under the deep tubewell is 35.6 hectares.

improved institutional functioning and good governance and b) better mobilisation of revenue and utilisation of resources (GoWB 2007). Most of these indicators are compiled from the panchayat registers or other village registers, or from the Census and census-type surveys. The panchayat does not need to generate any additional data for completing this format. However, the format has the merit of bringing together a number of information on the panchayats and could also enable cross-sectional and year to year comparisons.

4. Village-level development profile (*Gram panchayater unnaayan byabasthar chitra*). The SRD cell is preparing Block level booklets for 3354 gram panchayats in 341 Blocks in the State. The booklet will map the position of each gram panchayat in the Blocks with respect to 17 socio-economic indicators like health, education, food security, nutritional status, household sanitation, performance in rural development schemes, resource mobilisation and utilisation. The gram panchayat level data on the 17 indicators are compiled from the administrative reports of the panchayats and the secondary data sources. The booklets will enable the gram panchayats to evaluate their relative performance on the selected indicators and plan their activities along those lines. This booklet is under preparation and was not available at the Raina gram panchayat at the time of our visit.

5. Data collected under the SRD (Strengthening Rural Decentralisation) scheme. The formal coverage of the SRD extends over 821 gram panchayats in 12 districts. However, in some districts some gram panchayats not covered formally by the scheme voluntarily have implemented similar programmes of *sarsad*-wise community-generated data. Raina gram panchayat is not covered under this scheme and hence this data base was not available at the gram panchayat.

6. Backward Region Grant Fund (BRGF), formerly RSVY, (Rashtriya Sama Vikas Yojana) baseline data. The BRGF scheme covers all gram panchayats in 11 backward districts of the State. Data on 170 indicators are compiled from secondary sources in this data base. Raina is not in a backward district; hence the data was not available at the gram panchayat.

Our visit to Raina gram panchayat revealed that the village-level data on population and amenities from the Census of India 2001, household level data from the RHS and the Self Evaluation Format were available at the panchayat office. The panchayat also maintains various other records and registers and have access to village level data from other departments, which provide useful information for local-level planning. We identified the most important sources of data at the gram panchayat as the ICDS records, the rural household survey and some other registers maintained by the panchayat and other departments.

3.1 Village ICDS Records

The Integrated Child Development Services (ICDS) was initiated in India in 1975 with financial and technical assistance from the UNICEF and the World Bank. The ICDS programme offers supplementary feeding facilities for children below the age of six, pregnant women and lactating mothers, pre-school facilities for children aged three to six, maternal and child health care services such as immunization and vitamin supplements and nutrition and health education for mothers.

The ICDS was initiated in Raina I panchayat in 1984. The ICDS centre at Bidyanidhi was set up in 1999. Prior to that, there was a single ICDS centre for Bidyanidhi and Birampur villages. At present, there are 18 ICDS centres in Raina gram panchayat and 236 centres in Raina I Block. The ICDS workers are also known as Anganwadi workers.

The ICDS or Anganwadi worker maintains several registers. Some of the registers are described below.

- i) *Child register.* All children in the village in the age group 0 to 6 years are recorded in this register. The date of birth, age, sex, school enrolment and monthly weight of each child is also recorded.
- ii) *Food register for children.* All children in the village in the age group 7 months to 6 years are recorded in this register. A daily attendance of children who take food from the Centre is also maintained.
- iii) *Food register for pregnant women.* A register similar to item (ii) above is maintained for all pregnant women in the village

- iv) *Pre-school student's register.* The names and daily attendance of children in the age group 3 to 6 enrolled for pre-school education at the ICDS centre are recorded in this register. This register does not include children in the village enrolled in other schools.
- v) *Register for pregnant women.* This register records the names, month of conception, probable date of delivery, immunization details, and other details of pregnant women in the village. The date and place of birth and sex of the child is also registered after delivery.
- vi) *Growth chart of children.* A growth chart with monthly recordings of height and weight of children in the age group of 3 to 6 is maintained by the ICDS worker.
- vii) *Immunization register.* The ICDS worker and ANM maintain an immunization register for new born children in the village recording the dates of vaccination and where the vaccination was taken. In case the vaccination was taken at a private facility, the ICDS worker records the date after verifying the papers.
- viii) The ICDS centre also maintains registers for stocks, accounts and expenses
- ix) *Village survey register.* The ICDS worker conducts a village household survey every five years. The register found at the Bidyanidhi Centre was made in 2005. The register allots a page to each household in the village. The following information on each member of the household can be obtained from the register
 - a) Name
 - b) Relationship with the head of the household
 - c) Age
 - d) Sex
 - e) Educational attainment
 - f) If SC/ST
 - g) If landless/marginal cultivator
 - h) Occupation
 - i) Date of Birth (of children)
 - j) Comments: In this column information on deaths, marriages or migrations are recorded, though exact dates of the event are not always available

Although the village survey register is updated every five years, information on births, deaths, marriages and migrations are updated regularly. In case of births and marriages, the names and details of the new members are recorded in the register. When a new

survey is conducted the households that have divided are recorded separately and households that have migrated permanently are deleted from the register. However, in cases where a part of the household have migrated (for example, a son and his family while the parents stayed behind), details of all members of the undivided household are recorded even when the migration is permanent in nature.

The High Level Expert Committee on Basic Statistics for Local Level Development is of the view that registers maintained by the Anganwadi workers have the potential to provide a basis for a village-level database (Government of India 2006, p.17). That is the most significant finding in the pilot studies of the Committee, particularly since no attention was given to the registers of Anganwadi workers when the National Statistical Commission of India examined the basic statistics for local level development.

The village survey register of Anganwadi workers contains most of the core information collected in the Census of India. In addition, information on births, deaths, marriages and migrations are updated regularly and the register itself is updated every five years, while the Census data are available decennially.

Moreover, the village survey register and child register have the potential to provide information to assist or substitute for the Civil Registration System. Although the National Statistical Commission stated that the Civil Registration System has the potential to provide estimates of vital events at the local level (National Statistical Commission (2001), para 2.7.8), according to the panchayat officials at Raina the registers maintained by Anganwadi workers were most reliable among the other sources.

3.1.1 An assessment of the quality of ICDS records at Bidyanidhi village. A census type household survey was conducted in Bidyanidhi village, Raina gram panchayat as part of a study on 'Landlessness and Debt in Rural West Bengal' in June 2005. The household level data collected in this survey was available to us. We attempted an assessment of the quality of ICDS records available at the Bidyanidhi ICDS centre through a comparison of the ICDS records with the survey data.

The ICDS centre maintains a register of the names, age and other details of all children in the village below the age of six. We were able to get the child register for the year 2006

from the ICDS centre.⁶ From this register we obtained the names of all children born in the village between January 2000 and June 2005. We compared this list with the list of children aged five years and below from the survey data.

According to the ICDS register, 59 children were born in the village between January 2000 and June 2005. According to the survey data the number of children in the age group 0 to 5 years in June 2005 was 61. The names of 54 children were found in both the lists.

We looked into the discrepancy in detail and allowed for some divergences on account of due to temporary or permanent migrations and misreported age during the survey⁷. As a result of this analysis we were able to conclude that the coverage of the ICDS in Bidyanidhi village is complete and the quality of the ICDS records is excellent.

3.2 Rural Household Survey

The Ministry of Panchayats and Rural Development has been conducting a Below Poverty Line (BPL) Census (also referred to as Rural Household Survey) through the State Governments since the Eighth Plan period (1992-1997). The survey was initiated with the ideology of narrow targeting of development schemes in post-liberalisation India. The objective of this Census is to identify households below the official income poverty line in villages at the beginning of the plan period for identification of beneficiaries for various poverty alleviation schemes. The survey was imposed by the Central government on the State governments leaving no room for local-level

⁶ The 2005 child register was not readily available because the present ICDS worker at the centre had joined in the year 2006.

⁷ There were five names in the ICDS list which were not found in the survey list. In three of the five cases, the households in which the children belonged (identified by the name of the child's father) were not found in the survey database. It could be that the households were not present in the village at the time of the survey or were not covered in the survey for some other reason. There is also a possibility that the household had settled in the village after June 2005 (but before January 2006). In the remaining two cases, the children's names were not recorded during the survey (Both the children belonged to the same household and the error was corrected during a later survey conducted in the same household in 2006). There were seven children in the survey list who were not found in the ICDS list. All these children were reported to be five years old. Hence there is a very high possibility that their age was under-reported during the survey and hence their names were not registered in the ICDS centre. There are reasons to believe that the ICDS data on age are more accurate than the survey data. First, data on the date of birth of the children were not collected in the household survey, but the ICDS register records the date of birth of each child. Secondly, in four of the eight cases, other children from the same households were recorded in the ICDS register.

organizations to select beneficiaries for Central government sponsored schemes. Though the RHS can be used to provide serial data on certain indicators, the purpose of the survey is to exclude certain people from the development schemes. The number of poor households is already specified by the Central government based on the Planning Commission estimates of the incidence of poverty in the region. The BPL census grades the relative deprivation of households on 13 indicators in a scale of 1 to 5.⁸ In West Bengal 12 of these 13 indicators were used for the survey. Households obtaining the lowest scores in the twelve indicators in the survey are identified as being below poverty line such that the total number of BPL households in the village corresponds with the number estimated by the Planning Commission. Beneficiaries for specific centrally sponsored schemes on housing and sanitation are also identified on the basis of scores obtained by households on some specific indicators on condition of housing and access to sanitation (Government of West Bengal 2007).

The RHS was conducted in Raina gram panchayat in 2005, prior to our 'Survey on Landlessness and Debt.' There was widespread discontent among the panchayat officials regarding this survey, as it was felt that the data collected in the survey was inaccurate and consequently the list of beneficiaries selected was also inaccurate. The panchayat conducted another survey of a similar nature in the same year and reported the cases of discrepancies to the Block officials.⁹ Some of the discrepancies were amended later but a large part of the discrepancies were not attended.

The list of BPL households and the scores obtained by the households on each of the twelve parameters were available from the Raina gram panchayat office. The complete data of all households from the RHS were not available at the gram panchayat.

3.2.1 An evaluation of the RHS data. We tried to assess the quality of the data collected in RHS by matching the data on some of the parameters with our survey data. The two data sets would be roughly comparable since both the surveys were conducted in the same year. There were 36 households in the BPL list of which 32 households could be found in our survey list. Our analysis is restricted to these 32 households.

⁸ This methodology used in the BPL Census for the Tenth Plan period (2002-2007) was suggested by an Expert Group. The list of parameters and the scores used are in Annexure 1.

⁹ The household level data collected in this alternate survey was available at the gram panchayat.

Female-headed households – A household being headed by a woman was considered as a “special kind of disability” (P12) in the BPL Census. Of the 32 households, 12 were female-headed households according to the BPL Census. We found that seven of these households were effectively not female-headed households. In case of two households the wives were reported as the head of the household even when the husband was present and economically active. In five cases, the widowed mother was reported as the head of the household when the effective head of the household was the working adult son.

Land ownership – Of the 32 households only one was reported to own land in the BPL Census. According to our survey 12 households owned land, though the sizes of land holdings were very small and in all cases less than 1 acre.

Education status of the most educated member of the family – in 13 cases the education status of the most educated member of the family in the two data sets did not match.

Earning capability status – there were some discrepancies in the two data sets. In many households adult women members were not reported to be working thus gaining higher scores for households.

Means of livelihood – in six cases, the means of livelihood was reported as daily/ agricultural/ other physical labour in the RHS whereas according to our survey the household was self employed in agriculture or in some other occupation or held labour oriented regular job in unorganized sector. In two cases agricultural labour households were classified as ‘organized sector’ worker and ‘regular worker in unorganized sector’ respectively.

Educational status of children of 9 to 14 years – only in six out of the 32 households the score assigned in RHS matched with our survey data.

Thus the RHS records seem to be inaccurate and the discontent about this survey among panchayat officials was justified.

3.3 Records maintained by the gram panchayat and other departments

The gram panchayat maintains various records for administrative and other purposes and a considerable amount of information is available from such records. In most cases, the registers maintained by the gram Panchayats and other departments relate to the different development programmes implemented at the village level. These registers and records are maintained to track the allocation and expenditure of funds and assess the progress of different schemes. A brief description of the registers maintained at the Raina gram panchayat office is in Table 2. The High Level Expert Committee on Basic Statistics for Local Level Development emphasized that the village level registers should be standardised and provide serial data at the village level (Government of India 2006, p.31).

Table 2 Description of registers maintained by Raina gram panchayat

Name of register	Type of information available	If available at the GP* office	Comments
Works register	Public works done by panchayat under various schemes/allocations (SGRY, MP fund), description of work, date of proposal, commencement and completion, proposed and actual expenditure, benefit accrued	Yes	
Birth and death register	Cases of birth and death	Yes	
Panchayat land and property tax register	Name of head of household, size of household ownership holding, market value of land and building, tax assessment	Yes	All households in the village are taxed. Even a landless household has to pay a minimum annual tax of Rs. 3 per annum.
Tubewell register	Number, type and location of all tubewells constructed by GP	Yes	
Lease of water bodies register	Water bodies leased out to SHG, periodic earnings	Yes	
Toll tax register	Vehicle number and toll tax collected	No	The register is maintained by the Collector
Landless Agricultural Workers PF	Names of landless agricultural workers, PF account numbers, monthly contributions	Yes	At present there are 1500 PF account holders in the GP.
NREGA** register	Register maintained in prescribed NREGA format	Yes	The register is computerized

*Gram panchayat

**National Rural Employment Guarantee Act

The gram panchayats sometimes conduct independent household surveys for evaluation of various development programmes. The Raina gram panchayat recently conducted two household surveys recently on instruction from the Zilla Parishad to evaluate the rural sanitation scheme. The surveys were conducted in 2007 and 2008. In the 2007 survey,

information was collected on sanitation and on the type of ration card (APL/BPL/AAY) owned by the household. In the 2008 survey, information was collected on access to toilets and some socio-economic features of the households, such as social group (SC, ST, Others), number of literate members and the educational attainment of the most educated member of the household. These survey forms, which provide information on each household, are available at the gram panchayat office.

Gram panchayats have access to registers at the village primary school and primary health centre. The school maintains regular registers on attendance and performances of each student and registers for accounts and stocks (inventories like chairs, tables etc.). The school also maintains a register of all children in the age group of 0 to 13 years in the village based on an annual survey of all households in the village conducted by the school teachers. The survey is generally conducted between November and December. A separate sheet is allotted for each household in the village with children aged 13 years and below in the child register. If there is more than one child in the household they are recorded in the same sheet. Each year the child's age and enrolment status is updated, even when the child is not enrolled in the village primary school or ICDS Centre. The teacher at Bidyanidhi Primary School informed us that though they prepare this register independently, the ICDS workers help them in preparation of the register.

The block primary health centres and sub-centres prepare a monthly report on a prescribed format to be sent to the Block office every month. This report contains information on births and deaths, treated cases of different diseases, vaccinations and birth control methods. The monthly report, however, cannot be obtained from the primary health centre on demand.

The Block primary health centre, ICDS centre and the panchayat form an interlinked health and childcare system. Every fourth Saturday of the month a meeting is conducted at the gram panchayat office with the ICDS supervisor, the ANM and health supervisor and panchayat officials. A monthly data sheet is prepared recording the number of births and deaths, cases of morbidity, status of sanitation and drinking water supply for the gram panchayat. This monthly data sheet is on public display at the panchayat office.

4. CONCLUSION

The High Level Committee report suggested that nine categories of information be made available at the panchayat office for local level planning and administration (Government of India 2006, pp.1-2). The information available at the Raina gram panchayat on each of the nine categories is summarized in Table 3.

Our study suggests that the gram panchayat has substantial potential to generate and maintain statistical data at the level of the gram panchayat and below. Administrative records of some departments around the gram panchayat are closely interlinked and there is considerable data sharing between the departments. Though this is true for the village we studied it might not be true for all of India. According to the pilot study conducted by the High Level Committee, there is no such formal data sharing mechanisms between different agencies working at gram panchayats in Maharashtra and Haryana (Government of India 2006, p.25-26).

According to us, the ICDS records forms a very important and reliable data base at the village-level and have the potential to assist or partly substitute for the functions performed by the Population Census and the Civil Registration System. The ICDS registers have the advantage over Population Census data in at least two ways. First, the ICDS records provide the most up to date records at the village level. Secondly, unit-level household data are available from the ICDS. Panchayats do not have access to unit-level household level from the Population Census. The High Level Committee also mentions the high potential of the registers maintained by Anganwadi workers (Government of India 2006, p.17). However, it must be understood that our case study focuses on a well running gram panchayat. In other parts of West Bengal or in other States in India where the panchayati raj institutions are weak, the quality of village administrative records may not be so good. (According to our study at a village in Maharashtra, for example, the quality of ICDS data was not so good).

A major disadvantage of panchayat-level data bases is that there is no uniformity in the types of registers maintained at the different panchayats across the country. The High Level Committee recommends that the Directorate of Economics and Statistics in respective States should play an important role in ensuring statistical quality and

standards by providing the necessary guidelines and training to panchayat staff in the consolidation and maintenance of local level database (Government of India 2006, p.31).

West Bengal does not have an integrated system of land records and agricultural statistics as there is no village level plot-wise data on land ownership, tenancy, land use, cropping pattern and agricultural production.¹⁰ In the absence of such data, one major lacuna in village-level data base in West Bengal is the inability to integrate household level data on demographic and human development indicators available from village sources with the economic indicators on land ownership, tenure and crop production. Data on land ownership and tenancy are maintained at the block land and land reform offices and panchayats have access to this data. But the data are not updated periodically, which limits the use of this data for local-level planning.

Village records available at the gram panchayat and other departments may prove to be very useful for village studies. The panchayat administrative records will be useful if the village studies are concerned with the aspects that the panchayat administration has been formally recording. Furthermore, household level data on many parameters are available at the panchayats and villages from multiple sources (ICDS registers, village school registers, household surveys conducted by the gram panchayat), which can be used for village studies if we are allowed to access such data. In the case of Raina gram panchayat and other village level agencies that we visited, they were very forthcoming in sharing information with us. However, one has to be cautious of the fact that the quality of the data may vary across panchayats.

¹⁰ The erstwhile ryotwari States in India have village level agencies to collect seasonal data on land ownership, tenancy, land use, cropping pattern and crop production for each plot in the village. The permanently settled States Kerala, West Bengal and Orissa do not have such a system (see the paper titled "Land use and crop area statistics in West Bengal – a discussion on village record based statistics and sample survey based statistics" presented in this colloquium).

Table 3 Status of information available at the Raina gram panchayat

Type of information	If records available at GP	If accessible to GP from other source	Source of information	Comments
Basic Facilities	No	No		Facilities that are present are of common knowledge. GP maintains registers of the current facilities being constructed.
Number of factories	No	No		Common knowledge
Commercial establishments	Yes		GP tax register	
Bridges, roads	No	No		Location of such facilities are common knowledge, other information may not be available unless constructed by GP. If constructed by GP, details can be obtained from Works Register
Forest area, orchards	No	Yes	Block Land and Land Reforms Office	
Distance from nearest facilities	No	Yes	Census of India	The information is known to panchayat officials. Census data are often outdated.
Population	Yes	Yes	Census of India, ICDS household survey register	ICDS registers provide more up to date data than Census.
Birth and death	Yes	Yes	GP registers, ICDS registers, PHC registers, Monthly reports	
Morbidity	Yes		Monthly report of ICDS, ANM and Health supervisor	
Marriages	No	No		ICDS worker records in her register but date not recorded
Migration	No	No		Some information on permanent out-migration can be obtained from ICDS records
Educational status of villagers	Yes	Yes	Panchayat sanitation survey 2008, ICDS household survey	
Land utilization statistics	No	Yes	Block Land and Land Reforms Office	
Livestock and Poultry	No	Yes	Livestock Census	Household level record available
Number of market outlets	No	Yes	Common knowledge and GP tax register	
Employment Status of villagers	No	No		Village survey register has occupation data

REFERENCES

Government of India (2001), *Report of National Statistical Commission*, available at
<<http://mospi.gov.in/nscr/hp.htm>>

Government of India (2006), *Report of High Level Expert Committee on Basic Statistics for Local Level Development*, Ministry of Statistics and Programme Implementation Social Statistics Division Central Statistical Organisation.

Government of West Bengal (2007), *Annual Administrative Report 2006-2007*, Panchayats and Rural Development Department

Appendix: Description of parameters used in Rural Household Survey

Sl.	Parameters	Scores				
		1	2	3	4	5
1 (P1)	Effective landholding of the family (together with land cultivated as registered Barga holder)	No land	Irrigated land <1 acre or Non-irrigated land <2 acres	Irrigated land 1 <=2 acre or Non-irrigated land 2 <=4 acres	Irrigated land 2 <=4 acres or Non-irrigated land 3 <=6 acres	Irrigated land >3 acres or Non-irrigated land >6 acres
2 (P2)	Nature of Dwelling house	Houseless	Hut with only 1 room	Hut with >= 2 rooms	Partially Pucca house	Pucca house
3 (P3)	Number of garments per member	No. of garments <2	Greater than 2, Less than 4, but no winter garment	Greater than 2, Less than 4, with winter garments	>4, with winter garments, but <6	>6
4 (P4)	Food security	Can manage <1 square meal a day during the major part of a year	Can manage <1 square meal a day during the major part of a year	Can generally manage 2 square meals a day but sometimes fails	Can manage at least 2 square meals during all seasons	no shortage of food security
5 (P5)	Ownership of consumer items - Cycle, Radio, TV, Electric Fan, Pressure Cooker	no ownership	owns at least 1	owns at least 2	owns at least 3	owns all or any of the following items - computer, refrigerator, colour television, electrical cooking utensil, costly furnitures, Light motor vehicle or commercial vehicle, tractor, two or three wheeled mechanized vehicle, power tiller, grinding machine, cooking gas connection
6 (P6)	Educational status (of the most educated member of the family)	illiterate	Primary <= class V	Greater than class V upto graduate level/ but less than ClassX	upto graduate level/ professional diploma	Masters' degree/ professional degree others
7 (P7)	Earning capability status	all members are infirm/ old/ children , no regular earner	women & child labourers	only adult male & women labourers, no child labour	only adult male labourers	
8 (P8)	Means of livelihood	daily/agricultural/ or her physical labour	agriculture and provides own labour at field	self employed rural artisan/hawker, those who do not employ others	labour oriented regular job in the unorganized sector	others viz., job in the organized sector, medical practitioner, advocate, own business, production agency no school dropout
9 (P9)	Educational status of children of 9-14 years (Highest to be considered for more than 1 child)	never goes to school	school dropout and work outside with others	school dropout and work at home	school dropout and not employed	
10 (P10)	Type of loan	loans from familiar persons for everyday needs	loans from familiar persons for production needs	loans from an agency for some particular purpose	loans from a recognized agency	no loan
11 (P11)	Reason for going out of the village for employment of the principal earner of the family	temporary employment	seasonal employment	any other means of livelihood	reasons other than income	does not have to go out to earn
12 (P12)	Special kind of disability	permanently disabled and without any social or Government assistance	Aged without assistance	women head of the family	expenses more than family income due to treatment of one of the family members from an incurable disease	none of the above

Rethinking ICDS: A Rights Based Perspective

The ICDS programme is one of the most important public programmes in India, reaching out to the most neglected sections of the population. However, its coverage needs to be expanded to include every child, pregnant and nursing mothers, and adolescent girls. Its functions need to be separated, with a specialised person to provide pre-school education and another worker to take charge of health and nutrition aspects. Coordination between the health and education departments is required for maximum efficiency. Also, it is important to set clear goals, so that achievements can be assessed and work given direction.

DIPA SINHA

Little Savithri of Chittempally Tanda in Ranga Reddy district was 18 months old, but looked like she was three months old and weighed only 5.5 kilos. She could not even turn over when she was lying down, there were no expressions on her face, and she had extremely thin hands and legs and looked terminally ill. Her family (consisting of her parents, grandparents, uncles and aunts) had given up on her, as they could not afford to buy expensive tonics.

Her mother, Jaya, already had Savithri's brother, a three year old, to take care of. She was now seven months pregnant. She was 14 years old when she got married, and now, at the age of 19, she is expecting her third child. She had to do all the household chores and also work on the family land. The only person who had time to take care of Savithri was 14-year old Sukhi, her father's younger sister. Sukhi had dropped out of school, as she was to be married in a month's time.

This family is not an exception in rural Andhra Pradesh. There are thousands of children who are malnourished, with no special care, and large numbers of mothers who are too young to have healthy children but have had repeated pregnancies. Many of these young mothers are overburdened with work, undernourished, and in urgent need of healthcare. A large proportion of adolescent girls are out of school, and face the prospect of early marriage or sexual harassment, with little hope of freedom.

According to the second National Family Health Survey (NFHS-2), conducted in 1998-99, the infant mortality rate in Andhra Pradesh is 66 per 1,000 live births. About 38 per cent of children under three years of age are underweight, over 50 per cent of deliveries take place at home, and only about 60 per cent of children in the age group of 12-23 months are fully vaccinated. About 54 per cent of girls in the 11-14 age group, and 20 per cent of girls in the 15-17 age group, are in school. The median age at marriage for women aged 20-49 in rural areas is 14.9 years. Further, there has been little change in the condition of women and children (especially girl children) with respect to health in the last decade. In spite of the hype about Andhra Pradesh being a "hi-tech" state, leading the IT industry in the country, there has been a slowdown in reduction of infant and maternal mortality in the last two decades.

The situation at the all-India level is similar, if not worse. According to NFHS-2, only 65 per cent of women access antenatal care, and less than half of all deliveries take place with skilled attendance. The maternal mortality ratio is as high as 540. About 50 per cent of women are anaemic, and the median age at marriage is 16.7 years, in spite of a law against child marriages. The infant mortality rate is 67.6 per 1,000 live births, and 45.5 per cent of children under the age of five are chronically undernourished. The rate of decline in infant mortality has slowed down from the 1990s onwards in India, even when compared to countries like Bangladesh and Nepal. The recent

World Health Report also puts India among slow progressing nations in child and maternal care.

ICDS and Its Impact

This paper discusses the reasons for dilution of the Integrated Child Development Services (ICDS) programme. It argues that for ICDS to be effective in reducing infant mortality, combating malnutrition and improving child health there must be: (a) a firm conviction that every mother and child has a right to health and well-being and that this is non-negotiable; (b) an assertion of the state's obligation to ensure that all mothers and children have access to basic healthcare and nutrition; (c) a change in the existing social norms that allow the violation of the rights of mothers and children; and (d) uncompromising public action on the rights of mothers, adolescent girls and children.

The only institution at the village level that is responsible for the health and well-being of mothers, children and adolescent girls is the anganwadi centre. The anganwadi centres were created under the ICDS programme, which started in 1975 with the following objectives:¹ to improve the nutritional and health status of children in the age group 0-6 years; to lay the foundation for proper psychological, physical and social development of the child; to reduce the incidence of mortality, morbidity, malnutrition and school drop-out; to achieve effective co-ordinated policy and its implementation amongst the various departments to promote child development; to enhance the capability of the mother to look after the normal health and nutritional needs of the child through proper nutrition and health education.

ICDS was initiated in 33 blocks in 1975, and expanded to cover almost 6,500 blocks in 2004. The programme recognises that in order to reduce infant mortality and malnourishment, it is extremely important to also cater to the health and well-being of the mother. Initially, the focus was on the period from the time she got pregnant until she delivered. Later, it was realised that the mother needed nurturing from much earlier, and therefore the programme for adolescent girls, the Kishori Shakti Yojana (KSY), was started in the year 2000-01.²

To some extent, ICDS has been a successful programme. Infant mortality

declined from 94 per 1,000 live births in 1981 to 73 in 1994. Severe malnourishment has decreased from 15.3 per cent during 1976-78 to 8.7 per cent during 1988-90 [Chandrasekhar and Ghosh 2005]. However, the dismal status of child health in India shows that there is a lot more to be done.

Field surveys such as that recently conducted by the Centre for Equity Studies in association with the commissioners of the Supreme Court (N C Saxena and S R Sankaran) show that the overall conditions of ICDS in the country is far from satisfactory, though there are considerable differences in the performance of the scheme between different states [Drèze and Sen 2004]. The experience of many working in rural India also shows that there is a huge gap between what is planned under ICDS and what is actually happening on the ground.

Further, the reach of the ICDS programme is very limited. There are only six lakh anganwadis in the country, compared with an estimated 17 lakh required for universal coverage based on existing norms. Supplementary nutrition is currently provided to 3.4 crore children, as opposed to 16 crore children (half of whom are undernourished) in the age group of 0-6 years [Drèze and Sen 2004].

Beginnings of a Public Debate

The poor condition of mother and child health in India is not a matter of wide concern and public debate. Governments are seldom pulled up for not succeeding in providing better access to health and nutrition to the most vulnerable. Improving ICDS or primary health services is not on the election agenda of any of the political parties, and receives only cursory mention in the manifestos. The state of child health or the functioning of the ICDS centres rarely make headlines in the newspapers. It is therefore not very surprising that the anganwadi centres or the primary health centres (PHCs) do not function effectively, since for any public institution to function, it is necessary to ensure accountability through public action. "What the government ends up doing can be deeply influenced by pressures that are put on the government by the public. But much depends on what issues are politicised and which deprivations become widely discussed and electorally momentous" [Drèze and Sen 1995:87]. The task of protecting the rights of infants

and young children and their mothers is yet to become a social issue that concerns everybody.

There have been some positive developments in the last few years that are a ray of hope for the women and children of our country, and need to be worked upon. Firstly, in response to the writ petition filed by People's Union for Civil Liberties (PUCL) in April 2001, the Supreme Court issued an order in November 2001 directing the government to ensure that ICDS is immediately expanded to cover every hamlet in the country. This order also states that ICDS should reach every child below six years of age, every pregnant and lactating mother and every adolescent girl. Further, all SC/ST hamlets in the country should be covered as a matter of priority. The impact of a similar order on mid-day meals, issued by the Supreme Court on the same day, provides some important lessons as to what legal action can achieve when it is combined with public action.³

Secondly, the present UPA government in its common minimum programme has committed itself to universalising the ICDS scheme to "provide a functional anganwadi in every settlement and ensure full coverage for all children" (national common minimum programme of the government of India, 2004:6).⁴ Being a coalition government, its stability depends on its performance with respect to the objectives of the common minimum programme. This can be used by other parties, and by the public, to exert pressure. As the performance of the government will be appraised based on what it has done on each of the pledges made in the common minimum programme, the coverage and quality of ICDS is likely to come under close scrutiny.

Thirdly, the National Advisory Council (NAC) has shown keen interest in ICDS, and made detailed recommendations to improve the coverage and quality of the programme. These include a sixfold increase in financial allocations for ICDS over a period of two to three years. This would provide for the expansion of ICDS to all the habitations in the country, and for doubling per-child expenditure as a first step towards facilitating quality improvements (NAC's recommendations on ICDS, August 2004).⁵

Although there is now an emphasis on universal coverage of ICDS, the anganwadi centre is still not explicitly acknowledged as an institution created

to fulfil the state's obligation towards the protection of the rights of the mothers and children. This issue requires further mobilisation.

Absence of Social Norms

The issues that are to be addressed by ICDS, such as maternal/child health or nutrition or adolescent health, are as much about social norms as they are about poverty, access to resources, etc. For instance, gender discrimination deeply influences the status of women and children in the community. Likewise, attitudes towards women, pregnancy, nutrition, and early childcare have a great impact on the status of maternal and child health.

Especially in rural areas and among the poor, pregnancy and childbirth are extremely private issues, rarely addressed beyond the circle of concerned women. For instance, if a woman goes to the hospital and there is no doctor, and she delivers under a tree, this does not become an issue of protest in the community. Should an infant die as soon as it is born, or a mother die due to excessive bleeding after delivery, there is no expression of shock or outrage. Similarly, if the child is severely undernourished, it is seen as an act of god, resulting from some kind of 'karma'. Anxious parents who consult doctors spend lots of money and are seldom given proper advice on feeding the child differently. When girls are married at 13 or 14 years of age, there is no debate; this is seen as an accepted norm.

Women and children, the beneficiaries of the ICDS programme, are not given any importance in the community and therefore the anganwadi centre is also not given any respect. Absence of a social environment conducive to giving support to the most vulnerable sections of society, dilutes the services of the anganwadi worker as well as the healthcare system. For example, the messages that women must eat green leafy vegetables, eggs, milk, fruits and so on when they are pregnant are so unrelated to the predicament of women that they fall on deaf ears. The fact that women are not even eating leafy vegetables (let alone eggs or fruits), despite being advised to do so for 30 years, is seldom examined. It is assumed that it is enough just to tell women that they should take care of themselves and eat a good diet. It does not matter that social norms to encourage such practices

and support structures to make them possible, do not exist.

Creating a New Social Environment

Any programme that aims at improving the health of women and children must begin by addressing the lack of norms. In the absence of a supportive environment, even the best of services (such as antenatal care or supplementary nutrition or micronutrient supplementation) do not reach the target group. This acts as a significant barrier against women's access to what is due to them. It is the responsibility of the government, through the anganwadi centres, to work towards creating new norms that support mothers' and children's rights. To change norms, the entire community has to be mobilised to protect the rights of women and children. Everyone in the community, men and women, old and young have to be involved in a process of debate and discussion on what is best for the health of the mother and the child.

The gram panchayat and local bodies must review the functioning of the anganwadi centres and also the status of mother and child health in the village regularly.

An environment should be created where the village appreciates a man who brings water, fetches firewood or helps his wife with cooking, bathing and feeding the child. Such assistance often invites derision, as the man is seen to be womanly. If a girl is married off very young, then the community must react and get together to stop the marriage. A malnourished child or an infant death must become the concern of the entire village. It is only when this happens that there will be some meaning to the food given in the anganwadi centre and the colourful posters telling the woman what she should eat. If it is accepted that the woman has a right to a safe delivery, and that it is the government's duty to protect her right, then the ICDS programme needs to address the social norms that undermine women's rights.

Strengthening ICDS

Given that women and children have a right to health and nutrition, it becomes the responsibility of the government to create, through ICDS, a norm where these rights are not violated. For ICDS to play such a role, the following are some issues that need to be considered.

Community involvement in ICDS: To ensure the involvement of the community,

every anganwadi centre should have a mothers' committee that meets regularly to review and monitor the functioning of the centre. In Andhra Pradesh, this committee consists of two pregnant women, two lactating mothers, two mothers of children in the age-group of 0-6 years, and two mothers of adolescent girls. It is usually women who are in the neighbourhood of the anganwadi centre who are chosen to be members of this committee. The meetings are rarely held. These women have not been trained, and do not know what their role is supposed to be as members of the mothers' committee. The anganwadi worker (AWW) too is not clear about the role of such a committee. As there is little respect for this committee in the village, it often remains on paper, and makes little difference on the ground. There are names listed only because the AWW has to report every month to her supervisors. Since there is no public debate and discussion in the community on the anganwadi centre, its function and purpose, mothers' committees become substitutes for a meaningful community involvement.

The ICDS programme reaches out to only a small section of the village population, giving the impression that it is a "project" and not a universal entitlement. The number of beneficiaries gets fixed on an arbitrary basis and there is no flexibility to change it. For instance, supplementary nutrition in Ranga Reddy district is to be provided to six pregnant women, six nursing mothers, 16 children in the age group of 6 months to 35 months, and 30 children in the age group of 3-6 years. As the programme excludes a majority of women and children, the active involvement of the community is difficult to achieve. The ICDS programme is seen not as a rights-based institution, but a 'podi' (powder) centre where, once in a while, some white powder is distributed on the basis of the AWW's likes and dislikes.

This lack of public ownership of the programme also opens the door to large scale and blatant corruption. It is no secret that in many places the supplementary nutrition powder is sold by the AWW to farmers as feed for buffaloes. In other instances, the powder is strained to extract the sugar. So much so that during 'Ugadi' in Andhra Pradesh, people ask for the anganwadi 'jaggery' to make the festival sweets because it is of good quality! There is more public discussion of how good the jaggery is, and how one should try and get it for the Ugadi celebration, than there is

on why so many children are malnourished, why there has been an infant death in the village, or why a woman has not been able to go to the hospital for delivery.

Involving the community in ICDS is important so that the village feels a sense of ownership of the centre. It would also render the AWW more accountable and acceptable to the community.

Responsibilities of AWWs: The AWW, in many instances, is the only available government servant in the village and is responsible for the most vulnerable groups in the community. Yet she does not get the recognition she deserves. At the village level, the AWW is not involved in any of the village meetings concerning discussions on children, adolescent girls and women, even those where say, the school-teachers are involved. She is not consulted on any agenda. At the mandal⁶ level too, it is seen that although those in the revenue, social welfare, education and health departments sometimes coordinate with each other, the members of the ICDS project such as the community development programme officers (CDPOs) are not participants. Even at public functions, for instance, the CDPO never gets invited in the way that a mandal revenue officer (MRO) or a mandal development officer (MDO) are. Right from the beginning, the design of the ICDS programme has been such that it works in isolation from other departments, and is also poorly integrated with the community. This has resulted in the entire programme receiving little importance.

In the village, the AWW is viewed as just a "social worker" paid by the government and not as a functionary of the government. She gets paid only Rs 1,000 a month (less than the minimum wage), and even this amount is not paid regularly. On the other hand, the number of tasks that the AWW is expected to perform is impossible for most workers to complete.

The AWW, as mentioned earlier, is supposed to cater to the needs of pregnant and nursing mothers, adolescent girls and children below six years of age. She also has other responsibilities in the context of other programmes such as family planning, DOTs follow-up for tuberculosis, and girl child protection schemes. Each of these is a major task in itself, requiring a lot of effort. Although the needs of the three target groups under ICDS (children under six, adolescent girls, and pregnant and nursing mothers) are linked to each other, each group's well-being raises

independent issues. While it is true that in the long-term today's children are the adolescents of tomorrow and the parents of the day after, right now they are three different groups with specific needs, calling for immediate attention. Each of these is a specialised task requiring professional skills.

To begin with therefore, as many have suggested, there has to be a separation of the 0-3 year old, adolescent girls and women's programme from the pre-school education programme for 3-6 year old children [Ramachandran 2005]. The pre-school education programme for the 3-6 year olds could be linked to the primary school, with the mid-day meal as supplementary nutrition. In some villages of Andhra Pradesh where the centres are linked to the primary school, it is seen that the attendance at the anganwadi centre is greater because the younger children come to the centre along with their siblings who are in school. Further, the AWW feels part of the larger institution and is therefore motivated to work. The children also like having a proper meal along with the older children in the afternoon. A kindergarten section in the school, open to all children in the age-group of 3-6 years, can be visualised, with the number of teachers being decided according to the number of students.

There is a need for a separate full time trained professional worker to carry out the other tasks of providing nutrition for the under-3s, ante- and post-natal care, immunisation and adolescent health. This person could also be responsible for conducting meetings in the village with the different groups such as women, youth, gram panchayat and so on, working towards creating a norm in favour of children and their rights. This person will have to work closely with the auxiliary nurse midwife (ANM) and the health department. *Comprehensive planning and decentralisation:* Many of the functions of the ICDS programme depend on the health department for their success. For instance immunisation, ante-natal care, family planning and referral services are all provided by the health department. The role of the AWW is to act as a motivator and a link person between the community and these services. At present there is no institutionalised mechanism for this coordination beyond the village level. At the village level the ANM liaises with the AWW as a contact person in the village and gets data from her on who is pregnant

and whether any deliveries or deaths have taken place. Some times, basic first-aid material is also left with the AWW, e.g., oral rehydration solution (ORS) packets and paracetamol tablets.

This kind of coordination is not the result of a careful plan of action worked out by the concerned departments at the higher level. Since all the activities are linked, there is a need to understand the significance of this kind of convergence. Two small examples, drawn from the M V Foundation's experience (see next section), may help to illustrate the point. In the first case, a meeting was held with all the AWWs in one mandal in Ranga Reddy district and their help was sought in motivating women for institutional delivery. The AWWs said that they had given up doing that because when they did take women along to the PHC, there was nobody there to provide the service, and if they dared to ask, they were shouted at by the ANMs. The ANMs, for their part, do not see why the AWWs should have anything to say about the PHC. Coordination at a higher level, along with informing the ANMs that this is part of the role of the AWW, would have been helpful.

Another instance was a meeting in one mandal, held at the PHC, with the ANMs and the medical officer and all the AWWs. The PHC had been given orders that the entire population should be immunised for filaria within two days. The dates had already been fixed for the entire state. The medical officer therefore called the AWWs for a meeting to instruct them to carry out this job under the supervision of the ANMs. It would be impossible for the ANMs to do it alone, as each of them was looking after 5-6 villages. The AWWs however refused to cooperate, saying that it was the last week of the month and that they had to finish all their records in time for their monthly meeting, failing which they would be pulled up by their superiors. There was a long fight between the AWWs and the PHC staff. Ultimately, some of the AWWs agreed to cooperate, while others said they would have nothing to do with the programme. In this case too it was felt that it would have been better for the medical officer to have a meeting with the CDPO and for the two of them, to plan the entire programme together. Smooth coordination between different departments is extremely important for effective implementation of such programmes.

Closely related to lack of coordination is the problem of haphazard and top-down

planning. Most programmes are ad hoc, suddenly launched without any preparation or follow up, highly centralised and without involvement of the community. There is, out of the blue, a rally with school children on institutional delivery, a meeting with adolescent girls on HIV/AIDS, or a week to celebrate breastfeeding with no information to the community. Usually it happens this way because it is planned at the state or central level and suddenly passed down to the AWWs as a task to be completed. This makes it very difficult for the AWW, who is the frontline worker facing the community, to implement the programme in a meaningful manner.

There is no clarity on the roles of the supervisor and the CDPO. Since all planning, to the last detail, comes from above, at the level of the project office, there is no space for any creative thinking. The supervision is reduced to monitoring the different registers that are to be maintained by the AWW. This top-down approach to planning must be replaced by a more decentralised system where the AWWs are given space to review their experiences and share what they think must be done to achieve the goals of ICDS. There should be clarity on what must be planned at the level of the central and state governments and what must be left for the anganwadi centres, the local community and the local bodies to decide for themselves.

MV Foundation Experience⁷

The above recommendations on ICDS are based on the experience of the MV Foundation in mobilising the community for protection of child health in eight mandals of Ranga Reddy district, Andhra Pradesh. The MV Foundation, drawing on its experience with children's right to education, recently began working on the issue of children's health. Initially, data were collected on every birth that took place in the village each month and the prevalent practices of delivery and child care. It was found that almost 50 per cent of the women delivered at home, and that infant mortality was very high. When these figures were compared with PHC statistics, it emerged that the government did not report most deaths.

More disturbing was the fact that even when eight to nine children died in a month in a mandal, there was total indifference. It did not become a matter of

concern for anyone in the village – the gram panchayat, the anganwadi centre and the community evaded the issue. At best, people sympathised with the family. Invariably, it was seen as a personal issue, not something that required any social action.

Rallies and marches were organised in the village on the issue of children's right to health. Meetings were held at the village and mandal level, where this information was shared with the entire community to discuss how each of these deaths could have been prevented. This entire exercise was also to help create an environment where the community felt responsible for the well-being of the children born in the village. It was then decided that the gram panchayat should review the condition of all children in the village every month along with all the concerned government functionaries such as the AWW, the ANM and the school headmaster.

Members of youth groups and mothers' committees, among others, also attended some meetings in the village. Consequently, in about 50 villages, each month the ANM and AWW, along with the sarpanch and the ward members, now review the number of children who have been immunised; whether supplementary food was reaching the children; details on whether any children died during the month, and so on. They even discuss cases where families did not cooperate or refused to get children immunised, or were unwilling to take the supplementary nutrition provided at the anganwadi centre. The gram panchayat, along with others, then visits these families and motivates them to access the services.

Some changes have already taken place through this process. The gram panchayat in many villages now feels responsible for the children in the village. The ANM and AWW discuss with the gram panchayat obstacles in delivering services. For instance, in Sheriguda, the ANM explained that she was not doing ante-natal check-ups because there was not enough space with privacy in the village. In response the gram panchayat decided to convert a godown into a centre for the ANM and the material stored in the godown was shifted to the gram panchayat office.

In some villages the AWW was caught red-handed while she was trying to sell the supplementary food, and action was taken against her. At the same time, should the AWW require any support from the village, it is provided. In many villages, there

were complaints that the ANM was not available. She, in turn, claimed to be making the requisite number of visits. To resolve this problem, a public announcement (with drum beats – 'dappu') is now made the previous evening, informing everyone about the ANM's visit and asking parents to send their children for immunisation and health check-ups. Such issues are now being tackled at the village level, with government departments and the community coming together.

More importantly, as a result of this process of public mobilisation on child health, what was so far seen as a private issue confined to the family (and even within the family, primarily the mother's concern) has now become an issue for the entire village. In village after village, ceremonies are held where the sarpanch gives out birth certificates to all children below the age of two. Once the backlog is covered in an institutionalised manner, all children in the village are given birth certificates as soon as they are named. For the sake of the certificate, families are naming their children within the first month itself. Through this exercise of giving birth certificates, the panchayat and the community now celebrate the birth of every child – a significant shift from the earlier position where the death of a child was considered as the mother's fate.

It is in such an environment that the specific issues of each child are taken up. The families are informed and motivated to avail the services available to them from the ICDS and health departments. At the same time, there is also a discussion on giving children time, and sharing of responsibilities within the family. Through regular review meetings, the community exercises pressure to ensure that the ANM comes regularly and that the anganwadi centre functions.

The community is thus being sensitised to the well-being of pregnant women, mothers and children. With increasing community interest in the anganwadi centre, the AWW is empowered and ICDS is beginning to have a presence in the village. Issues that cannot be resolved at the village level are being taken up by the gram panchayat to higher authorities. For instance, a number of petitions have been submitted to the CDPO asking for better buildings for the anganwadi centres, sanction of additional centres, and steps to activate non-functional centres. The rights of mothers and children are becoming a public concern, with the community

demanding from the state what is due to mothers and children.

Conclusion

ICDS is one of the most important public programmes in India, reaching out to the most neglected sections of the population. It can go a long way towards protecting the rights of mothers and children. India cannot dream of progressing with high rates of maternal and child mortality and extremely high levels of malnutrition.

However, a lot needs to be done to enable ICDS to reach its objectives. The coverage of ICDS has to be expanded to reach out to every child, pregnant or nursing mother, and adolescent girl. It is important to demand universal coverage of mothers, children and adolescent girls, dealing with the issue from a rights-based perspective. This involves a clear commitment to the protection of children's rights on the part of the state, and public mobilisation to ensure that rhetoric translates into action.

Secondly, the functions of ICDS have to be separated, with a specialised person to provide pre-school education and another trained worker to take charge of the health and nutrition aspects of the programme. Active steps should be taken to implement widely-supported recommendations such as keeping anganwadi centres open for the whole day, setting up crèches for younger children, providing take-home rations for those under three years of age, etc. Further, there must be coordination between the health and education departments to provide these services efficiently. Also, the National Rural Health Mission's plan to post community health workers in each village should be integrated with the ICDS programme, to avoid creating a parallel system and to ensure better coordination between ICDS and the health system.

Thirdly, it must be recognised that the anganwadi centre is expected to perform multiple functions, each of which is equally important and needs to be carefully thought out. There is a need to first have a vision of what is best for the protection of the rights of mothers, children and adolescents, and of the state's responsibilities in this regard. Based on such a vision one could then estimate the required resources, how these resources can be mobilised and how they should be spent. It is important to set clear goals, so that achievements can be assessed and work given direction. As things stand, the process works the other way round. There is first an

estimate of the resources available, and then "realistic" demands and plans are made, contingent on these pre-specified resource commitments.

The health and well-being of mothers and children must be recognised as an overwhelming priority, and all efforts made to realise this goal. Children are the future of the country and cannot wait any longer. There has to be a serious debate on this issue, involving all sections of society, leading to a vision of what we aspire to be. Backed by a clear vision as well as political commitment to the rights of mothers and children, the ICDS programme and the AWW could play a key role towards the development of the country. **EPW**

Email: dipasinha@gmail.com

Notes

[This paper is based on the MV Foundation's experience of working on children's right to health in eight mandals of Ranga Reddy district. The author is Health and Population Innovation Fellow of the Population Council and is associated with the MV Foundation.]

- 1 See <http://wcd.nic.in/udisha/htm/objectives.htm> (Department of Women and Child Development, government of India).
- 2 See <http://wcd.nic.in> (Department of Women and Child Development, government of India).
- 3 For further details of these orders, and of the campaign that has built around them, see www.righttofoodindia.org.
- 4 See <http://pmindia.nic.in/cmp.pdf>.
- 5 For further details, see www.nac.nic.in.
- 6 A mandal in Andhra Pradesh, is an administrative unit consisting of about 30-40 villages and an average population of around 50,000. The administrative structure in Andhra Pradesh comprises the district, mandal and gram panchayat.
- 7 The MV Foundation is a voluntary organisation working on issues of child labour and children's right to education. It is currently active in 6,000 villages of Andhra Pradesh.

References

- Chandrasekhar, CP and Jayati Ghosh (2005): 'The Unfulfilled Potential of the ICDS' in www.macroskan.com.
- Drèze, Jean and Amartya Sen (1995): *India: Economic Development and Social Opportunity*, Oxford University Press, New Delhi.
- Drèze, Jean and Shonali Sen (2004): 'Universalisation with Quality: An Agenda for ICDS', report prepared for the National Advisory Council, available at www.nac.nic.in.
- International Institute for Population Sciences (2000): *National Family Health Survey 2: India 1998-99*, IIPS, Mumbai.
- Ramachandran, Vimala (2005): 'Reflections on the ICDS Programme', *Seminar*, No 546, February.
- The World Health Report (2005): 'Make Every Mother and Child Count', World Health Organisation, Geneva.

Nutrition Policy

Shifts and Logical Fallacies

If food security is a priority, then foodgrains should remain at the head of the agenda for policy, especially if the nutritional problems of the marginalised are to be addressed. Further, the type of diversification of food baskets that is taking place, apart from being restricted to the better-off, is certainly unhealthy.

IMRANA QADEER, ANJU P PRIYADARSHI

During the 1970s and 1980s nutritionists were intensely engaged in understanding the very nature of under-nutrition in India, how to control it and debated issues of measurement of poverty. By the mid-1980s, however, with the decline in severe forms of malnutrition such as kwashiorkor, marasmus, pellagra and beriberi, the direction of nutrition research changed. While the concern with declining pulse production remained, their research focus shifted towards the ascendancy of nutrition related diseases such as diabetes, hypertension, coronary heart disease, micronutrients and obesity. Supplementation programmes rather than nutrition policy debates and social planning engaged them, while earlier, the latter were important areas of interest for most senior nutritionists.

This movement away from an unfinished agenda left a vacuum in policy research that was taken over by liberal economists. Other than production, pricing and expenditures on food, they also started exploring and explaining consumption demand based on trends in consumption data. The National Nutrition Monitoring Bureau data had shown a decline in energy consumption the late 1970s and 1980s. This was reported as early as 1984 [Rao 1987; Ramachandran 1987]. The same data had also provided insights into energy and protein consumption declines across income classes [Gopalan 1992]. An associated trend of declining consumption of cereals between 1972-73 and 1993-94 was later picked up in the NSS by a number of economists and was proclaimed as a "sobering thought against mind-boggling projections of demands" for foodgrains [Rao 2000].

Over time, several explanations were offered for this decline and each of them had a set of assumptions behind it. These explanations were (a) the increasing welfare of people as reflected in the improved infrastructure in rural areas [Rao 2000], (b) self sufficiency of the nation reflected by the increasing foodgrain production and buffer stocks of over 60 million tonnes along with exports of the same [GoI 2002], (c) diversification of the food basket [Radhakrishna et al 2004] and (d) voluntary shift away from cereals due to expanding and diverse food markets, taste and lifestyle changes affecting the behaviour of the poor [Dyson et al 2000]. Dyson predicted a further decline of cereal consumption to as low as 11.45 kg per person per month (38 kg per annum per person) with a change in the social situation. In short, this set of scholars judged declining cereal consumption as reflecting of improved social conditions and therefore a positive trend. The nutritionists not only remained silent, but their preoccupation with micronutrients or protective foods, gave credence to these ideas. This understanding of nutritional trends has had a serious impact on nutrition policy.

1993 Policy Document

The nutrition policy document of 1993 did talk of intervention programmes, but not in isolation. It placed equal emphasis upon increasing foodgrain production, the public distribution system to ensure food security, land reforms, health and education. Its goal was to reduce further chronic energy deficiency (CED), low birth weight, anaemia of pregnancy, to achieve production targets of 250 MT by 2020, to have a strategy for horticulture to promote

protective foods and evolve an inter-sectoral approach to nutrition planning. In contrast, the Tenth Five-Year Plan proposes a paradigm shift, with four basic thrust areas: (i) Shift from household food security and freedom from hunger to nutrition security for the family and individuals.

(ii) Shift from untargeted food supplementation to screening of all persons from vulnerable groups for identification of those with various grades of under-nutrition and appropriate management.

(iii) Shift from lack of focused intervention on the prevention of over-nutrition to strategies of prevention, control and management of obesity.

(iv) Though it mentions the need for ensuring production of cereals, pulses and seasonal vegetables to meet the nutritional needs, this comes a poor fourth on the list of priorities.

An unexpected though critical proposal is to reduce the recommended dietary allowances (RDAs) and set up an expert committee to formalise this suggestion. In other words, the proposal comes first and the experts to rationalise it come later – a procedure that hardly befits a planning exercise.

This paradigm reflects the new understanding of nutritional issues based on the explanations for the declines in cereal consumption offered by some eminent social scientists and the current concerns of the nutritionist. Planning, however, cannot ignore the majority of the people, specially the underprivileged. The focus on 'families and individuals' and 'nutrition security' rather than on 'food security' indicates a belief that food shortages and hunger are no more significant policy issues. Secondly, identification of individuals through surveillance and their 'management' transforms a major public health problem into a clinical problem that is amenable to institutional management or targeted programmes. These interventions are considered effective irrespective of failing infrastructure of the public distribution system, and health and welfare services.

The thesis of 'improved welfare in rural areas' has already been critiqued by Saha who not only showed serious methodological flaws in drawing conclusions, but also questions the basic assumption of sufficiency of food and welfare in rural areas [Saha 2000]. Undermining of rural welfare

during the 1990s was evident from the fact that investments in rural development over this period declined from 14.5 per cent to 6 per cent of GDP [Patnaik 2004]. The budget for health declined from 1.5 per cent to 0.9 per cent of the GDP [GoI 2002] and the targeted public distribution system failed to reach the poor [Swaminathan 2000]. The thesis of improved welfare hardly matches the evidence. Similarly, Dyson's projection of a persistent decline of cereal consumption to levels as low as 138 kg per person annually under the influence of non-cereal and non-food commodity markets also fails. After 2000-01, when levels of food availability of as little as 151 kg per person per year were reached, a reversal of the declining trend took place when programmes of food-for-work were introduced over the following two years [Patnaik 2004]. This only reaffirms that while the elasticity of demand of cereals is articulated within complex social conditions and is susceptible to variations, these variations are possible only after a certain minimum level of cereal intake is achieved. According to the principles of nutritional science, 60-70 per cent of the total energy should come from carbohydrates preferably starch [National Institute of Nutrition 2003]. The tendency to retain minimum levels of cereals – the source of starch – is thus not only economically, but also nutritionally rational.

The current shifts within nutrition policy and the main arguments on which these are based are the focus of this paper. It primarily uses evidence from rural India to explore some of the myths regarding contemporary shifts in diets.

Population Averages versus Class: Issues of Methodology

Most of the analysts of National Sample Survey (NSS) data who show declines in cereal consumption either look at averages

and gloss over class differentials or assume that only the population below the 30th percentile is significantly calorie deficient. Also, they make no attempt to actually look at food items other than cereals that have been consumed nor pay attention to some basic principles of nutritional sciences. Re-interpreting the NSS data is thus the key to understanding the fallacies of the popular explanations. We are analysing direct consumption of foods and not overall consumption that also includes foods used as animal feed and for processing in the food industries.

For our analysis, data for four rounds of NSS were covered (38th, 43rd, 50th and 55th rounds) and the entire sample was classified using calorie deficiency of less than 90 per cent to define different classes. To make the 55th round comparable to the earlier rounds we have made adjustments for the two recall periods used in the 55th round for the consumption survey using the adjustment factors as suggested by Sen and Himanshu [Sen et al 2004]. The official poverty line of the Planning Commission fell on the upper side of the range of monthly per capita consumption expenditure (MPCE) of the poor group for each survey year. Table 1 gives the distribution of the sample over different years in each class as well as the variations in calorie deficiency within classes (ranging from less than 70 per cent to less than 100 per cent). The value of this classification is that it is sensitive to the complex and pervasive nature of the problem of under-nutrition. Hence, it brings out the fallacy of the assumption that there are clearly vulnerable groups that can be managed through surveillance and individual identification. Secondly, by defining under-nutrition as 90 per cent of the recommended dietary allowance (RDA), we are able to show that, even when understated, the problem of under-nutrition is too

massive to be tackled through individual identification and management (Table 2). Table 2 gives the proportion of all those who get less or more than 2,400 calories, i.e., 100 per cent of RDA. It shows the real extent of the under-nourished population that moves from 63.9 per cent to 67.1 per cent over the four NSS round as against the declining undernourished population using the new mantra of reduced RDAs

Table 2: Distribution of the Total Households by the Identification Criterion (Rural)

	1983-84	1987-88	1993-94	1999-2000
Very poor	14	11	10	10
Poor	33	29	34	34
Total poor	47	40	44	44
Middle	47	47	43	44
High	6	12	13	12
Intake of less than 2,400 calories	64	61	64	67
Total	100	100	100	100

Note: The criterion for classification of the groups is based on level of per capita per day (pcpd) calorie consumption which is lower than the RDA.

Source: NSS unit level record data.

Table 3: Total Per Capita Per Day Unit Values Spent on Selected Items (Cereals) (Rs)

	1983-84	1987-88	1993-94	1999-2000
Very poor	5.4	6.2	12.5	20.8
Poor	6.3	7.6	15.2	25.9
Middle	7.2	9.2	18.6	33.4
Well-off	8.4	11.9	23.7	47.9
All	6.7	8.7	17.7	32.8
Selected Non-Cereals				
Very poor	61.7	95.6	138.1	212.9
Poor	78.1	114.7	171.5	267.0
Middle	104.1	153.5	228.8	362.7
Well-off	140.0	195.3	292.2	515.9
All	93.4	143.7	214.2	353.0
Total Selected Food				
Very poor	67.1	101.8	150.6	233.7
Poor	84.4	122.3	186.7	292.9
Middle	111.3	162.7	247.4	396.1
Well-off	148.4	207.2	315.9	563.8
All	100.1	152.4	231.9	385.8

Table 1: Identification of Poor and Very Poor on the Basis of Percentage of RDA Per Capita Per Day Calorie Intake Over the Years (Rural)

		1983-84			1987-88			1993-94			1999-2000		
		<70 Per cent Intake	<90 Per cent Intake	<100 Per cent Intake	<70 Per cent Intake	<90 Per cent Intake	<100 Per cent Intake	<70 Per cent Intake	<90 Per cent Intake	<100 Per cent Intake	<70 Per cent Intake	<90 Per cent Intake	<100 Per cent Intake
Very Poor	No of Hhlds	7328	9838	10222	4988	6762	6980	4005	5450	5609	4234	5787	5937
	Percentage	70	94	98	70	95	98	70	96	99	70	96	99
Poor	No of Hhlds	7282	16834	20097	5371	13013	15338	5690	14154	16687	6708	16922	19823
	Percentage	30	69	83	30	74	87	30	76	89	30	76	89
Total poor	No of Hhlds	14610	26672	30319	10359	19775	22318	9695	19604	22296	10942	22709	25760
	Percentage	50	81	90	50	84	92	50	86	94	50	86	94
Middle	No of Hhlds	3417	11253	16269	3898	16075	23911	3189	13975	20764	3033	14025	20781
	Percentage	10	32	46	8	34	50	8	37	55	8	38	57
High	No of Hhlds	290	550	782	148	708	1268	132	667	1207	117	695	1344
	Percentage	7	13	18	2	7	13	2	10	18	2	11	21

Note: Seventy per cent of RDA is 1,680 calories, 90 per cent of RDA is 2,160 calories and 100 per cent of RDA is 2,400 calories.

Source: NSS unit record data.

according to which undernutrition declined over the four NSS rounds from 47 per cent to 44 per cent. This is because calorie deficiency of a lower order is excluded from the analysis.

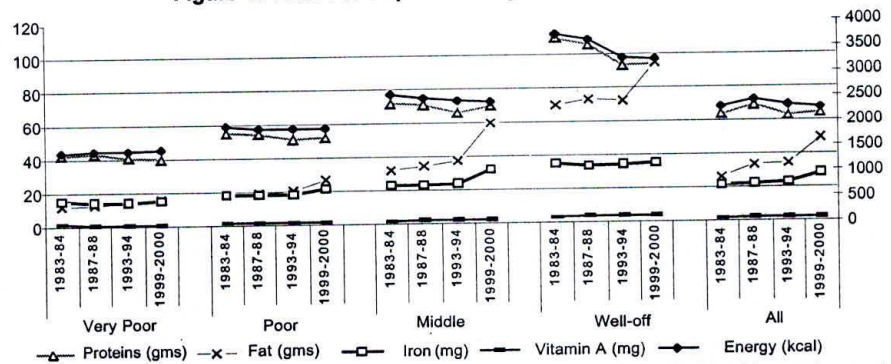
Even within our very conservative operational definition, the vulnerability of the poor is evident where those getting less than 90 per cent of the required energy ranges from 94 to 96 per cent of the population in the group. In the middle classes, using the same criterion, 33 to 38 per cent households are energy deficient. This proportion goes up to 47-57 per cent (Table 1), when all those below 100 per cent of energy requirement in the class are taken. In other words, this section of the middle class, under social pressure to keep up its status (non-food consumption), is perpetually struggling against hunger. It is very different from the image of the newly emerging urban middle class, crowding the consumer markets and probably overlapping with those well-off and middle households that fall in the proportions getting over 100 per cent of calorie RDAs (Table 2). The following section offers a brief contextual review of food availability and expenditure on food.

Food Availability and Consumption Expenditure Over the Years

Patnaik's work on availability of foodgrains defined as net output plus net imports minus net additions to public stock, shows that, in the 1990s, India lost what it had achieved after independence. Foodgrain availability, as five-year average per head per year, came down from 199 kg at the turn of the 19th century to 148.5 kg prior to independence. In the year 1945-46 it was as low as 136.8 kg. It then rose to a three-year cumulative average, of 177 kg in the early 1990s and then declined sharply to 163.2 kg. In 2000-01 it was only 151.06 kg and showed some recovery over the following years due to the food-for-work programmes of the government [Patnaik 2004]. It is important to recognise that this decline had a differential impact on the consumption of different classes as a result of differences in access due to a household production of food, quality of food and its prices and wages.

An analysis by Radhakrishna et al shows that between 1970-71 and 2000-01, the relative prices of food in rural India that were comparable to non-food items in the initial decade increased while the prices of non-foodgrains declined significantly.

Figure 1: Total Per Capita Per Day Intake of Nutrients



Note: * All the nutrients corresponds to the primary Y-axis (scale 0-120) on the left side of the graph except 'Energy(Kcals)' which corresponds to the secondary Y-axis on the right side of the graph.

Figure 2: Proportionate Intake of Energy and Nutrients from Cereals

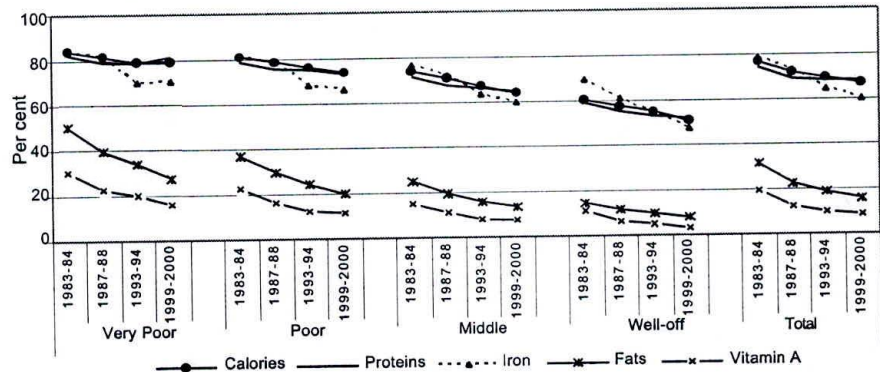
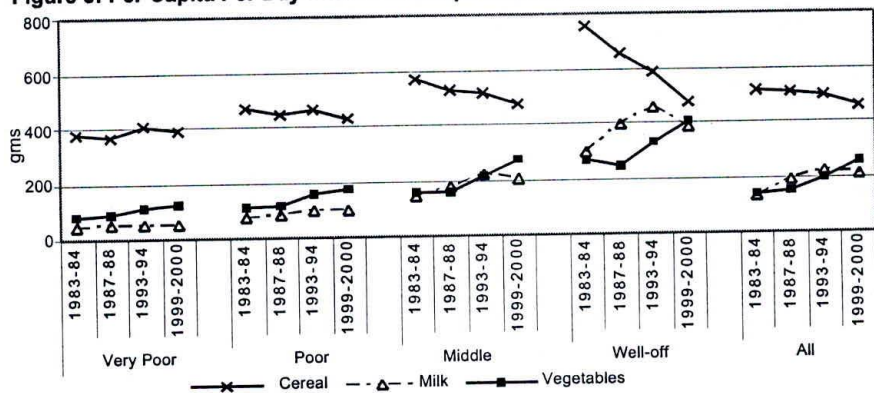


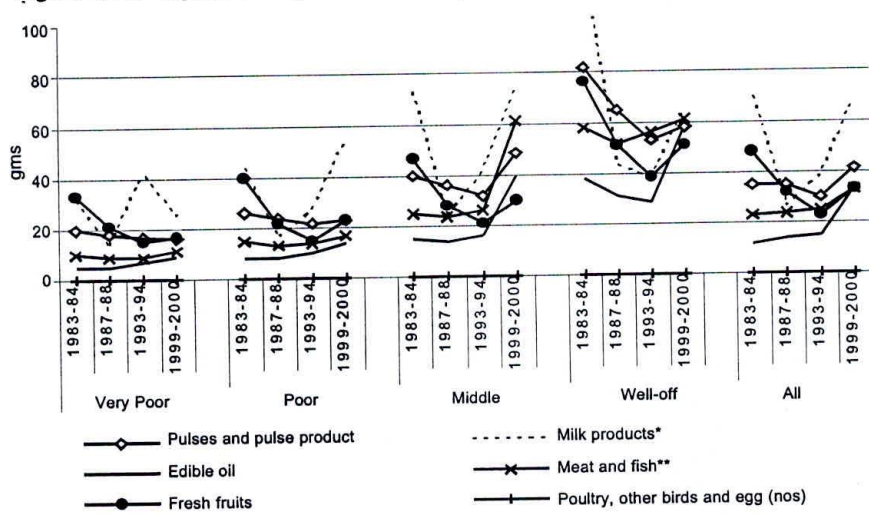
Figure 3: Per Capita Per Day Intake of Groups of Food Item other than Cereals (gms)



Using the NSS percentiles they also show that while total consumption expenditures have increased for all classes over three decades since the 1970s, consumption expenditure on food shows a negative growth rate over the 1990s. It is pertinent to note that for non-cereals, all classes showed a positive growth rate during the 1970s and 1980s and a negative growth rate for the 1990s. But, for cereals, negative growth rates were evident from the 1970s itself, except for those below the 30th percentile who held on till the end of the 1980s [Radhakrishna et al 2004]. This tenacity of the poor to retain their

cereal intakes are the key to our argument in favour of foodgrain security at class level and not nutrition security at the individual level. Our analysis of the four rounds of NSS reveals that the quality of cereal and non-cereals consumed by the poor and the rich were markedly different as shown by the higher unit values of the items for the well-off (Table 3). Taking the expenditure of the very poor class for the year 1983-84 as the base, the total expenditure on selected food and non-food items across classes shows a uniform trend of a tripling of expenditures over time. For each round of NSS, the well-off

Figure 4: Per Capita Per Day Intake of Groups of Food Item other than Cereals (gms)



Notes: * Butter, ghee, icecream not included here but included in edible oils and processed food group respectively.
 ** Poultry and eggs are given in nos and quantity consumed varies between 0.07 for the very poor to 0.3 for the well-off.

Figure 5: Proportionate Intake of Calories from Food Groups other than Cereals

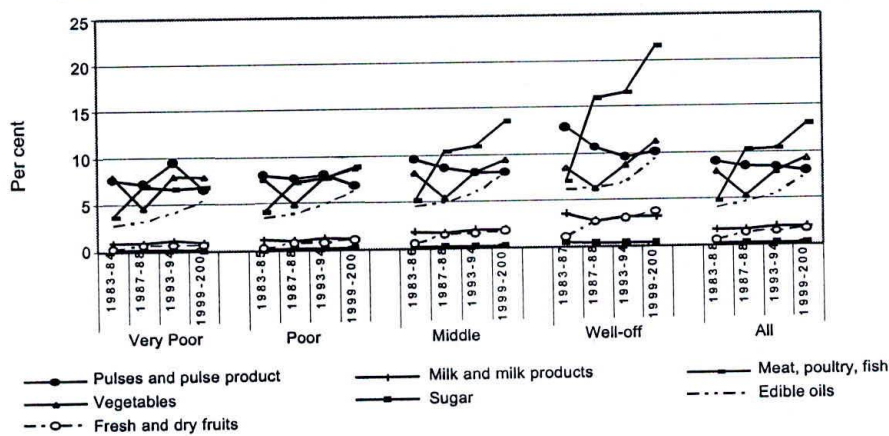
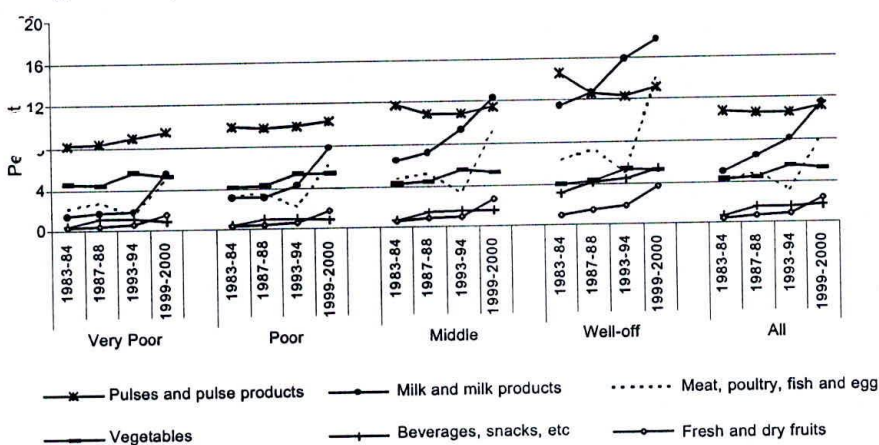


Figure 6: Proportionate Intake of Proteins from Food Groups other than Cereals



Note: * Sugar group provides 0.05 per cent of proteins for Very Poor group to 0.08 per cent for the well-off in 1999-2000 and Edible Oils Provides 0.1 per cent of Proteins for the Poor and 0.08 per cent for the well-off for this period.

have over time spent five times more compared to the very poor. The increase in expenditure on non-food items over time varied from two and a half times in the well-off to not even double in the poorest class. For food items, however, the rich show an increase of 3.5 times and the poor of 2.4 times. For non-cereals, both the extreme groups show a rise of expenditure by four times, but for cereals the poorest have an expenditure jump of 3.5 times as compared to the rich who raise their expenditure only 2.4 times (Table 4). This again reiterates the pressures in the 1990s on the poor who do not spend much on non-food items. Even though the expenditure of the poor on in non-cereal foods increases over time in the same proportion as that of the well-off, their expenditure on cereals reflects a higher proportionate increase compared to the rich. The expenditure gap between the richest and the poorest for each year also increases significantly for non-cereals and non-food items studied, revealing the advantages and choices available to the

Table 4: Total Per Capita Per Day Expenditure on Selected Item Groups

	1983-84	1987-88	1993-94	1999-2000
All Selected Food and Non-Food Items				
Very poor	1.00	1.19	2.06	2.94
Poor	1.45	1.68	2.95	4.36
Middle	2.36	2.78	4.97	7.70
Well-off	5.42	6.11	10.58	17.17
All	2.56	2.94	5.14	8.04
Total Non-Food***				
Very poor	0.41	0.43	0.58	0.66
Poor	0.55	0.58	0.87	1.05
Middle	0.97	1.06	1.75	2.47
Well-off	2.81	2.93	5.01	7.91
All	1.23	1.31	1.99	2.74

***It includes fuel and lighting, clothing and footwear, education, medical and rent.

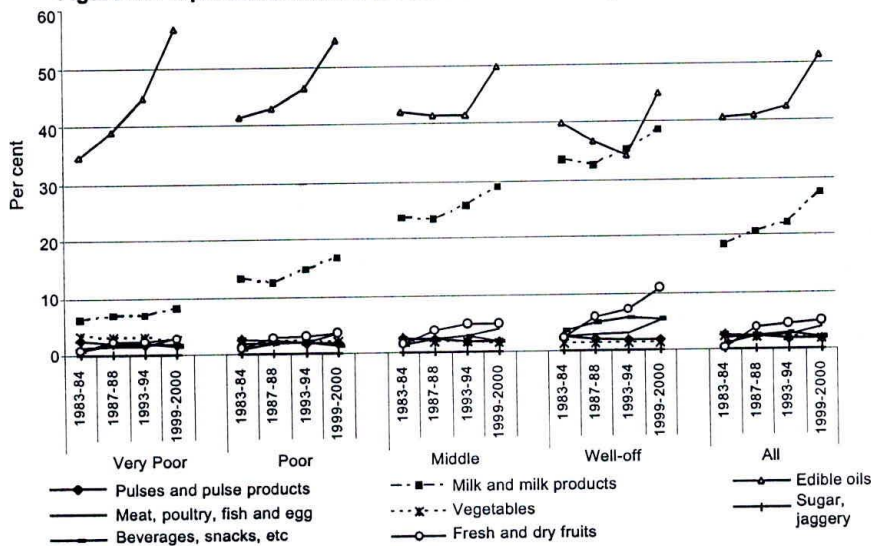
	Total Food*			
Very poor	0.59	0.76	1.47	2.28
Poor	0.90	1.10	2.08	3.31
Middle	1.39	1.72	3.22	5.22
Well-off	2.61	3.18	5.56	9.26
All	1.37	1.69	3.09	5.02

* Selected food groups: pulse, milk, meat*, edible oil, vegetables and fresh fruits.

	Cereals			
Very poor	0.37	0.43	0.85	1.23
Poor	0.52	0.58	1.07	1.59
Middle	0.68	0.72	1.28	1.88
Well-off	0.92	0.96	1.52	2.23
All	0.62	0.67	1.18	1.73
	Non-Cereals*			
Very poor	0.22	0.33	0.63	1.04
Poor	0.37	0.52	1.01	1.72
Middle	0.71	1.00	1.94	3.35
Well-off	1.69	2.22	4.05	7.02
All	0.75	1.02	1.91	3.28

Note: Base is the total selected expenditure of the very poor group for the year 1983-84.

Figure 7: Proportionate Intake of Fats from Food Groups other than Cereals



rich. This picture of availability, unit prices and expenditure patterns, makes it clear that there is a vast difference both in the quantity and quality of food intake and therefore, only household consumption of classes alone can give the real picture of food basket diversification.

Shifts in Consumption Pattern

We now examine the quantity and quality of food baskets and the importance of traditional patterns of mixed cereal and protein-based Indian diets as against the newly emerging low cereal diets. These shifts raise questions of adequacy of energy for the poor and dietetic balance of the well-off. The shift in energy intakes over time in each class points out that except for the poorest, who have marginally improved their energy consumption, all other classes have lowered their energy intake (Figure 1) and yet, the energy intake of the poor is clearly below 90 per cent of the RDA. They also consistently take amounts that are less than that prescribed for one person in one day, of proteins (60 mg), fat (30 mg), iron and Vitamin A (30 mg and 2400 mg respectively). The level of protein intake is sufficient for the middle class and more than sufficient for the well-off despite a decline over time. Also, despite a lowering over time, the energy intakes of the middle and the well-off classes remain more than adequate as do their intake of fat which shows a sharp increase from 1993-94. While the iron intake of the middle class is below the recommended, the well-off get just about sufficient quantities of iron. Their Vitamin

A intake, though better than that of the poor, is still below the recommended allowances. Thus we find that while the diets of 44 per cent of the sample are markedly deficient in all four main nutrients and calories, the middle class lack only micronutrients. Since 38 per cent of them get less than 90 per cent of required energy, the micronutrient deficiencies may be concentrated in this group.

In providing the calories and the nutrients, cereals play an important role in the poor classes. Figure 2 shows that, the proportion of total calories derived from cereals and cereal substitutes have come down to 80 and 74 per cent for the two poor classes, 65 per cent for the middle and 51 per cent for the well-off. It is pertinent to note that in a balanced diet, of the total calories, 60-70 per cent should come from carbohydrates, i.e., cereals [National Institute of Nutrition 2003]. For the two classes of the poor, 82 per cent and 73 per cent of the proteins also come from cereals for these classes. While the proportion of fats, Vitamin A and iron from cereal have declined over time in all classes, for the poor it still provides nearly 70 per cent of iron and 30 per cent of fat. Thus, while foods with high protective value are important, it is also important to appreciate that cereals are the cheapest food sources for energy and proteins. "Different food mixtures provide different protein energy percentage depending upon the total calories available" [Sukhatme 1972]. In fact, in absence of adequate quantities of cereals (energy), optimum dietary protein utilisation does not take place for which sufficient energy is necessary [ICMR 1998].

When quantities of cereals increase in diets of the poor, it not only leads to increased and better utilisation of proteins but also helps lessen some micronutrient deficiencies. It thereby reduces the scope of intervention programmes, and perhaps ensures their greater efficiency. Keeping this in mind we now turn to the issue of diversification of the food basket to examine how cereal are being replaced and among whom.

The NSS data shows that the maximum decline in total per capita cereal intake is for the affluent, the poor actually show an improvement, except in the 55th Round. Only 15-25 per cent of their total energy comes from other foods. The actual intakes of various foods per capita per day show that despite the slight improvement of cereal intake the very poor still get less than 400 gm, the poor just about manage the recommended amounts (409 gm) while the other two classes – despite significant decline over time – still consume sufficient quantities of cereals. Milk and vegetables show a sharp increase among the middle and the well-off classes where the current intake levels have reached 200 gm and above. Pulses and milk products again show improved intakes among the better off even though milk seems to be favoured as against milk products. This trend is repeated for food items such as edible oil, meat, fish, poultry and eggs and fresh fruits. Visible fats are adequate only for the well-off (40 mg) and the middle class shows an improved oil intake only in the 55th round of NSS. The poor on the other hand are still struggling to reach the prescribed levels of these foods with the singular exception of vegetables (Figures 3 and 4). This evidence of diversification of the food basket, limited to the middle and the well-off classes, inevitably gets reflected in the proportions of calories, proteins and fats and other nutrients provided by classes of foods other than cereals and cereal substitute (Figures 5, 6 and 7). For the poor, the proportion of calories from oils and vegetables, milk and milk products, and fruits shows only a marginal increase over time, while that from pulses declines, and stagnates from sugars. None of these foods contributed more than 4 per cent of the total calories. For the well-off protein rich foods provide 29 per cent of energy, which is twice the required 8-12 per cent, and therefore unhealthy. Similarly, milk, its products, meat, and poultry as a source of protein are relevant only for the well-off and the middle groups. The fat intake of the poor is under 20 gm per day and 10 gm

of it is from oils. For the well-off the total fat intake is around 80 gm per capita per day and 40 gm out of it comes from edible oils. This again reflects their unhealthy dietary pattern. On the basis of this analysis it is clear that diversification of food baskets is a reality only for the well-off and the middle classes, while for the poor (44 per cent) today, it remains a myth. It is also apparent that the nature of this diversification is neither healthy nor leading towards equity.

The vulnerability of the middle group was emphasised at the beginning. While 57 per cent get less than the required energy, the reported urban obesity (BMI > 27) is 36.7 and 48.6 [National Institute of Nutrition 2003]. The methodology of the survey however, is not spelled out. Neither the populations selected for the study nor the exact BMR levels are set out. According to the National Nutrition Monitoring Bureau (NNMB), in rural areas obesity is a problem among only 6 per cent of men and 8 per cent of women [NNMB 2002].

It is most probably located in the energy sufficient well-off class that constitutes only 12 per cent of the NSS sample or a section of the middle class and cannot be allowed to overshadow the extreme under-nutrition of 44 per cent or the 67 per cent energy deficient population of rural India.

Though vegetables and fruits are important, horticulture as conceived by the Tenth Plan – unlike the vision of Nutrition Policy (1993) – can hardly reach that half of the population that needs food the most. In the given market driven economy the strategy to promote horticulture actually promotes exports and elite markets, and not the local consumption of vegetables and fruits. Also, the crops it encourages are flowers, coconut, cashew nuts, mushrooms, aromatic plants, etc [GoI 2002], which cannot fill the real gap.

Our analysis thus shows that if food security is a priority then, food grains should remain at the head of the agenda for policy, specially if the nutritional problems of the marginalised sections are to be addressed. Secondly, the type of diversification of food baskets that is taking place, apart from being restricted to the better-off, is certainly nutritionally unhealthy. Thirdly, without undermining the urgency of pulse production, given the overlapping nature of calorie, protein and micronutrient deficiencies – that is often ignored when the NNMB data is analysed for discrete deficiencies – the importance of cereals needs to be realised as it supplies not only energy

but also substantial amounts of proteins and some small amounts of micronutrients. The paradigm shift conceived of by the Tenth Plan is premature. In view of the vulnerability of the poor and half of the middle class. The present policy needs to go back to the concerns addressed in the 1993 policy statement and focus on CED rather than micronutrients and obesity.

The Lowering of RDAs

There are several aspects of RDA that require serious consideration. The Tenth Plan hints that the present RDAs are flawed as they are based on incorrect assumptions such as a high Basal Metabolic Rate (BMR), a higher level of physical activity of the Indians and hence higher Physical Activity Ratio (PAR), and the use of a reference man and woman. It also states, "it is unlikely that any extra food at this stage (adolescence) can accelerate or extend the duration of physical growth. Additional dietary intake at this period can only lead to adolescent obesity" [GoI 2002].

These objections are based on little evidence and are therefore unconvincing. The new recommendations of the expert group of the Indian Council of Medical Research (ICMR) are based on the BMR factorial method where the Indian BMR is taken as 5 per cent less than that predicted by the internationally used Schofield's equation. On the other hand the actual BMR data on Indians is varied [Soares M J et al 1991; Shetty P S et al 1994; Ferro-Luzzi et al 1997]. These experts argue that the lower Indian BMR of healthy adults can be explained by climatic differences. Also, differences in the BMR of young and healthy men and women with Body Mass Index (BMI) of > 18.5, marginally undernourished with BMI of 17-18.5, and severely undernourished with BMI < 17, are noted but it is emphasised that once adjusted for weight and fat free mass with the analysis of covariance, these differences become statistically insignificant or even reverse due to an altered fat free mass composition. The degree of loss of body weight is therefore a key factor.

The Tenth Plan objects to the use of 'reference persons' (healthy young adults with heights of 163 cm and 151 cm and body weights of 60 kg and 50 kg for men and women) and proposes to use the average Indian body weight. At the same time it explains lower BMR of the Indians on the basis of low Indian body weights, lower protein turn over and a different body

composition. The truth is that the lower BMRs of the healthy Indian in comparison to that of the healthy European are one thing and the lowering of BMR due to falling body weight quite another. With low energy intakes, "BMR declines over a three week period by up to 15 per cent when expressed as per unit of body weight. Thereafter further fall in BMR are achieved primarily by progressive loss of tissue mass" [WHO/FAO/UNO 1985]. In other words this is not a racial or genetic feature, rather, an outcome of poor socio-economic conditions leading to physiological adaptation. With almost 50 per cent of the population being under 18 years of age [Indian Institute for Population Studies 2000], can their growth potential be denied by a restrictive standard? Specially, when RDAs are not for individuals but for groups wherein individuals have their own specific needs. It is well known that, as weight and exercise increase with adequate diet, BMR also increases [Venkata et al 2004].


Experts who proposed the present RDAs had gone into the details of its components and given convincing reasons for assuming higher PARs that are used to calculate RDAs [ICMR 1998]. The argument that physical activity in India has gone down can at best be true for the well-off and part of the middle class and is not a universal phenomenon. For instance, it is well known that the introduction of green revolution technology, by increasing the number of crops, raised physical activity levels initially – especially of agricultural labour. Subsequent mechanisation did not reduce physical activity, but replaced labour that was not reabsorbed [Saha 2000]. Today it is being argued that RDAs need to be based on energy expenditure rather than requirements. This ignores that people are inactive due to forced unemployment and not by choice. To use low physical activity of the middle class as reflective of a universal shift can be extremely misleading since, given the scarcity of physical activity studies in India, it cannot be simply assumed that all inactivity is an outcome of welfare. It is worth remembering that RDAs are at best policy guides and not prescriptions for individual management. Also, to shift from a 'reference' to an 'actual' group average requires full knowledge of levels of energy expenditure, activity levels and consumption of each group that we do not have. Are we then attempting to normalise CED and heading for multiple RDAs that are different for the rich and the poor?

The definition of Indians as 'energy thrifty' and well adapted to their environment is popular but, scientifically, adaptation is defined as "a steady state acquired by the body where it maintains its input and output". Several levels of adaptation exist that have their advantages and their penalties ranging from metabolic shifts, slowing of BMR, high morbidity and low physical activity [WHO 1985]. Which of these levels of adaptation will be accepted depends upon the social values as each level has its explicit penalties. In most civilised countries only the healthy with lowest morbidity rates and a normal BMR are considered to be the 'normally adapted' [WHO 1985]. In India, BMR studies particularly in relation to morbidity patterns are few. Even if it is assumed that a large proportion of the population will be adapted at low BMR due to CED, the question is, can low BMR and low levels of activity – biological and behavioural adaptation due to unemployment and poverty – be taken as the ideal level of adaptation for rescribing RDAs? Long back Gopalan pointed out that, "the term adaptation has been freely used to buttress statistical conclusions – and has been referred to as consistent with normal physiology". He argued that adaptation, "represents not a stage of normalcy but one of 'strategic metabolic and functional retreat' in response to stress, a device which may help the victim to ward off catastrophe of death but which unfortunately will not help him to 'live' life" [Gopalan 1987]. Energy requirements do not have a range but a threshold value, so excess calories get deposited as fat and are harmful. For a given height, therefore, there is a given weight and, once stunted, a person with the right weight for his age can become obese. It is this logic that is being stretched to argue that we do not need a reference person but the actual average.

The argument about absence of growth spurts for Indian adolescents is equally unsubstantiated as it is well known that growth spurts peak at around 14 years and even if slow, continues till the age of 19 years. A review of catchup growth in the adolescents of the third world shows that despite high levels of stunting and under-nutrition there is not enough data on catchup growth spurt after dietary correction (www.fantaproject.org/downloads/pdfs/adolescents.pdf).

The unscientific haste with which the lowering of RDAs is being pushed, points to some interesting connections. In a milieu of free markets where food plazas and junk

foods are proliferating, the freedom to consume is the law. No amount of lowering the RDAs is going to change this trend as is seen in the patterns of diversification. It may in fact promote the markets for packaged health food. What it would do, however, is to help the state save itself from the embarrassment of not providing sufficient quantities of foodgrain to the public distribution system and, thus, to those who need it most. Secondly, lowered RDAs may also help the statistical wizards to further lower the poverty lines that have already been brought down to single figures! Arguing for lowering of RDAs to ensure a minimum functional level of diet to all is conceivable only if distribution systems are fully controlled by the state, but not when the poor alone depend upon it. Thirdly, RDAs are the basis for calculating minimum wages. As it is, these calculations take into account the family size of 4.6 and two earning members [GoI 2001], which is only partially true. The NFHS-II puts the average size of the Indian family at five [IIPS 2000], and many of them have only one earning member and joint families. A further lowering of RDAs, therefore, will only worsen the situation.

The inadequate interpretation of declining cereal intake and the not so convincing arguments to lower RDAs are closely linked to the new paradigm of planning, wherein a dismantling of the food security system is being justified. The issue is, can professionals allow themselves to ignore tested logic and let unverified arguments pass unchallenged? 

Address for correspondence:
Imrana_qadeer@yahoo.co.in

[This work is part of the ongoing European Commission project, 'Monitoring Health Policy Shifts in South Asia'.]

References

- Dyson, Tim and Hanchate, Amresh (2000): 'India's Demographic and Food Prospects: State Level Analysis', *Economic and Political Weekly*, November 11, pp 4021-36.
- Ferro-Luzzi, A, C Petracchi, A V Kuriyan Kurpad (1997): 'Basal Metabolic of Weight – Stable Chronically Undernourished Men and Women: Lack of Metabolic Adaptation and Ethnic Differences', *American Journal of Clinical Nutrition*, No 66, pp 1086-93.
- Gopalan, C (1987): 'Measurement of Under-nutrition: Biological Considerations' in Gopalan, C (ed), *Combating Undernutrition: Basic Issues and Practical Approaches*, New Delhi, pp 15-16.
- (1992): 'Food Production and Consumption Trends' in C Gopalan, *Nutrition in Development Transition in South East Asia*, New Delhi-WHO, SEARO, pp 7-18.
- Government of India (2001): 'Rural Labour Enquiry Report on Wages and Earnings of Rural Labour Households (55th Round of NSS) 1999-2000', <http://labourbureau.nic.in/mvrep.txt.htm>, accessed on October 21, 2004.
- (2002): Tenth Five-Year Plan, Planning Commission, New Delhi, pp 34-52, 135.
- ICMR (1998): 'Nutrient Requirements and Recommended Dietary Allowances for Indians: A Report of the Expert Group of the Indian Council of Medical Research', New Delhi, pp 11-27.
- IIPS (2000): 'National Family Health Survey, 1998-99, India', Indian Institute for Population Studies, Mumbai, pp 18-23.
- NIN (2003): 'Dietary Guidelines for Indians – A Manual', National Institute of Nutrition, Hyderabad, pp 3-10.
- NNMB (2002): 'Diet and Nutritional Status of Rural Population', National Institute of Nutrition, Indian Council of Medical Research, Hyderabad, pp 107-08.
- Patnaik, Utsa (2004): *The Republic of Hunger*, SAHMAT, New Delhi, pp 12-19.
- Radhakrishna, R, Rao, K Hanumantha, C Ravi, B S Reddy (2004): 'Chronic Poverty and Malnutrition in 1990s', *Economic and Political Weekly*, July 10-16, pp 3121-30.
- Ramachandran, K (1987): 'Food Consumption in Rural Indian Households: Has It Increased in the Recent Years?' in C Gopalan (ed), *Combating Undernutrition: Basic Issues and Practical Approaches*, New Delhi, pp 278-82.
- Rao, C H Hanumantha (2000): 'Declining Demand of Foodgrains in Rural India: Causes and Implications', *Economic and Political Weekly*, Vol 35, No 4, pp 201-06.
- Rao, S J Kamala (1987): 'Seasonal Changes in Rural Diets' in C Gopalan (ed), *Combating Undernutrition: Basic Issues and Practical Approaches*, New Delhi, pp 283-85.
- Saha, Anamitra (2000): 'Puzzle of Declining Foodgrains Consumption', *Economic and Political Weekly*, July 1, pp 2453-54.
- Sen, Abhijit and Himanshu (2004): 'Poverty and Inequality in India: Getting Closer to the Truth', http://www.macroscan.com/fet/may04/pdf/Poverty_WC.pdf, accessed on September 10, 2004.
- Shetty, P S, M J Soars, W P James (1994): 'Body Mass Index: Its Relationship to Basal Metabolic Rates and Energy Requirements', *European Journal of Clinical Nutrition*, November 48, Suppl:S 28-37.
- Soares, M J, L S Piers, P S Shetty, S Robinson, A A Jackson, J C Waterlow (1991): 'Basal Metabolic Rate, Body Composition and Whole Body Protein Turnover in Indian Men with Differing Nutritional Status', *Clinical Science (London)*, September 81(3), pp 419-25.
- Sukhatme, P V (1972): 'India and the Protein Problem', *Ecology of Food and Nutrition*, Volume 1, pp 267-78.
- Swaminathan, Madhura (2000): 'Weakening Welfare: The Public Distribution of Food in India', *Left Word*, New Delhi, pp 101-08.
- Venkata, Ramana, Y, M V L Kumari Surya, S Rao Sudhakar, N Balakrishna (2004): 'Variations in Basal Metabolic Rate with Incremental Training Loads in Athletes', *Official Journal of the American Society of Exercise Physiologists (ASEP)*, Volume 7, No 1, February.
- WHO (1985): 'Energy and Protein Requirements: Report of a Joint FAO/WHO/UNO Expert Consultation', Geneva, pp 34-52.
- www.fantaproject.org/downloads/pdfs/adolescents.pdf, accessed on October 7, 2004.

TUFTS NUTRITION

The Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy
FOOD POLICY AND APPLIED NUTRITION PROGRAM

DISCUSSION PAPER NO. 1

Challenges to the Monitoring and Evaluation of Large Nutrition Programs in Developing Countries: Examples from Bangladesh

Rezaul Karim, Jennifer Coates, Gwenola Desplats, Iqbal Kabir,
Yeakub Patwari, Stephanie Ortolano, Thomas Schaetzel, Lisa Troy,
Beatrice L. Rogers, Robert F Houser, F. James Levinson

February 2002

Corresponding Author: James.Levinson@tufts.edu

Discussion papers provide a means for researchers, students and professionals to share thoughts and findings on a wide range of topics relating to food, hunger, agriculture and nutrition. They contain preliminary material and are circulated prior to a formal peer review in order to stimulate discussion and critical comment. Some working papers will eventually be published and their content may be revised based on feedback received.

The views presented in these papers do not represent official views of the School. The discussion paper series is available on line at <http://nutrition.tufts.edu/publications/fpan>. Please submit drafts for consideration as FPAN Discussion Papers to Patrick.Webb@Tufts.edu.

Introduction

Most large-scale nutrition surveys carried out in developing countries have been conducted to compile or update national or regional data that are independent of project activities. At the same time, a growing number of large scale projects are developing monitoring and evaluation systems that also build on periodic baseline and evaluation surveys to assess whether project objectives are being met, and whether improvements in nutritional status observed are indeed attributable to the interventions. Donors and governments are demanding increasingly rigorous evaluations to assess whether their operational investments are cost-effective. Such information also guides the direction of future activities.

One intervention, the Bangladesh Integrated Nutrition Project (BINP), has been using baseline and evaluative surveys since 1996 to assess its performance and to inform decision making. The project is widely acknowledged to be one of the most impressive large-scale, community-based nutrition programs in the world. At the same time, a careful analysis of its own survey data has revealed problems in collecting, analyzing and interpreting data--difficulties which are not unique to Bangladesh.

This discussion paper uses the BINP survey experience to explore three data-related issues: a) the role and validation of control groups; b) problems in interpreting anthropometric data (specifically, weight-for-height); and c) challenges in the collection of consistently comparable baseline and evaluation data. It is hoped that this discussion might inform the design and interpretation of future baseline and evaluative surveys.

Bangladesh Integrated Nutrition Project

The Bangladesh Integrated Nutrition Project, presently covering roughly 15 percent of the population of rural Bangladesh, is supported by the World Bank and other donors and is implemented by the Ministry of Health and Family Welfare in partnership with indigenous and international NGOs. Although community-based nutrition is not the only BINP activity, it is the most important.

The community-based nutrition component of the project includes growth monitoring of children under the age of two, counseling for the families of these children, and daily onsite food supplementation for children who are severely malnourished (below 60 percent of weight-for-age standards), or found to be faltering in their growth. Pregnant women are also weighed monthly and receive counseling and iron/folate supplements. Women with BMIs less than 18.5 receive daily food supplements. In addition, all women receive post-partum vitamin A supplements. Income generation in the form of homestead garden and poultry activities and participation in women's' groups (responsible for production of the food supplement and other tasks) is targeted to households designated as low income on the basis of household registration data.

The BINP baseline and midterm cross-sectional surveys relate to the first phase of the project, which was carried out in an initial six thanas¹ by the government in collaboration with the indigenous NGO, BRAC². The surveys were carried out in each of these six first phase thanas³ and in two non-project control thanas⁴. The control thanas were selected based on comparability with project thanas according to key indicators⁵. The baseline and mid-term surveys were carried out by two different contractors and begun in September/October 1995 and October 1998 respectively.

Both surveys followed a two-stage cluster sampling procedure. In the baseline survey, the first sampling stage selected 10 sub-geographic areas from each of the eight thanas. The second stage randomly selected one cluster in each of the 80 selected areas to total 80 clusters. In each cluster, all of the 40-50 households were interviewed for the household part of the survey, while mothers with children under the age of 5 years were interviewed in the second part of the survey.⁶ A total of 3,411 households and 1,647 mothers were interviewed (Mitra and Associates, 1996).

In the midterm evaluation survey, the primary sampling unit (PSU) in project thanas was the coverage area of the Community Nutrition Center (the project working area), covering 1,000 to 1,500 people. A comparable population was selected in control thanas. The first stage employed a sampling procedure to select 120 PSUs in the project areas and 40 PSUs in the control areas. In the second stage, 40 households having at least one child under-two years of age were randomly selected from each PSU. In all, 6,476 households were surveyed (INFS, 1999). The quality of data collection was ensured by: 1) intensive training of enumerators and 2) individual supervision of the data collection with performance checks. The midterm survey piloted and field-tested the questionnaire to ensure its accuracy, reliability, and appropriateness.

Initial analysis and reports by the contractors in each of these surveys were necessarily rushed to accommodate project reporting timetables. The data on children were therefore reanalyzed at Tufts to permit a more deliberate and systematic examination. In the Tufts analysis, anthropometric indices were calculated using EpiNut program in EpiInfo version 6.0. Nutrition indices were calculated and reported using both Z-scores and percentage of median of the NCHS anthropometric reference (NCHS, 1977). The analysis included specifically weight-for-age (the measure used in ongoing BINP

¹ There are 496 rural thanas or sub-district geographic-political units in Bangladesh, with an average population of 225,000 persons. Although the term employed by the government at this writing is "upazilla" we will retain the term "thana" used at the time of these surveys.

² Formerly the Bangladesh Rural Advancement Committee, this NGO now uses only its previous acronym.

³ Banaripara in Barisal division, Faridpur Sadar in Dhaka division, Gabtali thana in Rajshahi division, Mahammadpur thana in Khulna division, Rajnagar thana in Sylhet division, and Sharasti thana in Chittagong division.

⁴ Haziganj thana in Chittagong division and Sonatal than in Rajshahi division.

⁵ Literacy rates, availability of drinking water, type of housing, availability of electricity, land ownership, and population density.

⁶ Although the project itself focussed on children under the age of two years, the baseline survey, inexplicably, surveyed children up to the age of five. Data used in this analysis utilized only the under two population.

monitoring utilizing project-generated growth monitoring data), weight-for-height, and height-for-age (used as indicators of wasting and stunting respectively).

Issues and Challenges

Three major issues arise from analysis of the BINP data:

1. Control groups, their selection, and the extent to which changes in control group populations actually reflect secular change;
2. Anthropometric measures and their interpretation;
3. Baseline data necessary to assess progress in meeting project objectives.

Each of these is discussed below.

1. Control Groups

Normative evaluative survey methodology requires that pre-post data on a control population be utilized to approximate the secular change, which would have taken place in the absence of the project, and then to subtract this change from that observed in project areas. Experience from the Bangladesh project and from comparable projects elsewhere indicates, however, the difficulty of employing this procedure and the difficulty of interpreting results when this is done. Let us begin with the BINP data.

Table 1 summarizes the change in the prevalence of different degrees of malnutrition, as measured by three different indicators of nutritional status, between baseline and midterm in both project and control areas. As seen in the case of two of the child anthropometric indicators, weight for age median and height for age z-score, major improvements were found in the control population; in only one instance -- severe cases of malnutrition as assessed by weight for age median -- did malnutrition prevalence decrease significantly more in project areas than in controls ($p=.008$). An examination of other survey and surveillance data within Bangladesh indicates, however, that the control group improvements do not reflect secular change in the country as a whole. Data from the

Table 1. Nutritional Status of Children (< 2 Years) in BINP Baseline and Midterm Evaluation Surveys

	Project		Control	
	Baseline N = 501 N (percent)	Midterm N = 4,696 N (percent)	Baseline N = 202 N (percent)	Midterm N = 1,582 N (percent)
Underweight (WAM)*				
Normal	91 (18.2)	1,187 (25.3)	34 (16.8)	355 (22.4)
Mild	196 (39.1)	1,914 (40.8)	82 (40.6)	651 (41.2)
Moderate	166 (33.1)	1,489 (31.7)	69 (34.2)	504 (31.9)
Severe	48 (9.6)	106 (2.3)	17 (8.4)	72 (4.6)
Wasting (WHZ) ±				
Normal	264 (52.7)	2,553 (54.4)	116 (57.4)	825 (52.1)
Mild	127 (25.3)	1,542 (32.8)	51 (25.2)	517 (32.7)
Moderate	74 (14.8)	513 (10.9)	26 (12.9)	212 (13.4)
Severe	36 (7.2)	88 (1.9)	9 (4.5)	28 (1.8)
Stunting (HAZ) **				
Normal	123 (24.6)	1,455 (31.0)	39 (19.3)	485 (30.7)
Mild	97 (19.4)	1,289 (27.4)	51 (25.2)	454 (28.7)
Moderate	128 (25.5)	1,130 (24.1)	58 (28.7)	389 (24.6)
Severe	153 (30.5)	822 (17.5)	54 (26.7)	254 (16.1)

Chi² test was used to test for significant differences between baseline and mid-term values for the project area and the control area.

* P<0.001 for project areas and p<0.01 for control areas

± P<0.01 for control areas

** P<0.001 for project and control areas

Bangladesh Bureau of Statistics and the Bangladesh Nutritional Surveillance Project from the 1990s indicate an average reduction in underweight prevalence of 0.5 percentage points per year, while the reduction in underweight prevalence in the BINP control group during the three year period was over four times that (2.1 percent per year), a reduction of only 0.8 percentage points per year less than the project group (HKI, 1999).

Similarly, the reduction in stunting (height for age) in Bangladesh has been estimated at 1.88 and 1.73 percentage points per year by Child Nutrition Surveys of Bangladesh and by the Bangladesh Nutritional Surveillance Project, while stunting reduction in BINP control groups averaged 4.9 percentage points per year, or 2.7 times higher.

A similar phenomenon was observed even more strikingly in the Community Nutrition Project in Senegal, a project with a similar set of interventions carried out between 1995 and 2000 where, in urban areas, malnutrition rates fell among participants 12-17 months of age from 33.2 percent to 29.3 percent, but fell even more among controls of the same age, from 32.3 percent to 25.9 percent (World Bank, 2000). Although it is, of course, possible that these figures reflect reality, it is unlikely that in a project, considered successful by both service providers and beneficiaries, control group nutritional status would improve by more than that of project participants. Most likely, some confounding factor is at work with the control group population. (No comparable national data for these years exist for Senegal, making it difficult, to track secular trends.)

In the case of BINP geographic proximity of the control areas to project areas has been suggested as a partial explanation for the improvement (beyond secular trend) found in control areas. The hypothesis is that while control children did not receive food supplements, they may have benefited from some of the counseling taking place in the project areas (i.e., positive leakage effects). Data from the mid-term evaluation, however, indicate significantly better knowledge and practices in project as opposed to control areas, suggesting that movement of counseling messages across thana boundaries was limited at best. The evaluation found, in project areas, better water and sanitation practices, better understanding of exclusive breastfeeding, better understanding of the value of iodized salt, high participation rates in the vitamin A capsule distribution program, and, in turn, lower reported rates of young child morbidity, than in control areas.

A second explanation given to explain the larger than expected improvements in control group children has to do with the proliferation of non-governmental organizations (NGOs) in Bangladesh, reducing the likelihood of finding "untouched" non-BINP areas that can be used as pure controls. This suggests, at a minimum, that careful information should be collected in future evaluations on non-BINP interventions taking place in both the control and project areas.

If these explanations are at best partial, however, and if these improvements in control children are not significantly reflective of secular change, what other factors are likely to explain this phenomenon? Do we attribute them to an exaggerated testing or study effect with the idea that such an effect may be greater in the measurement of child nutrition?

Does the time/attention/sensitization associated with the one time gathering and weighing of young children in control areas constitute such a powerful intervention? If yes, what sustains the gains through to the next assessment?

One way of better understanding this problem may be to identify several reasonable well-matched control areas (well-matched to each other and to the project sites) and to collect baseline data on only one of these controls but gather “post” data on each of them, thus assessing the extent to which this testing or study effect is operative. (The “post only” data for a control group could also serve as baseline data for a new area about to enter the project.)

In the absence of such an assessment, however, the question posed is whether, in cases where changes in control group status do not represent secular change, they should be used to inform the real impact of a project?

Using such controls would lead to an underestimation of the effect of the project. If the project areas show greater improvement in variables compared to control areas, researchers can argue that an even greater difference would have been observed in the absence of confounders (for example, Hawthorne effect of being measured, spillover effects of behavior change communication (BCC), or non-project organizations working in control areas). This reasoning is commonly used in epidemiological studies examining associations between exposures and disease outcomes. Findings of no difference between project and control areas, or a greater improvement in control areas, makes it difficult to draw conclusions about the success or failure of the project, largely because it is difficult to measure, and in turn, statistically adjust for these external influences (for example, the extent to which Hawthorne effect, spillover effects of BCC or non-project organizations working in the control areas influence the variables of interest).

The problems noted above are hardly the only problems faced in trying to utilize control groups in project evaluations. Another problem is that of control group comparability. In efforts to launch a project quickly, adequate attention often is not given to the comparability of control and project populations. Although in BINP several socio-demographic variables were used to select comparable control groups, the results presented here indicate problems that complicate project evaluation. Most notable are the religious differences noted in Table 2 where the minority Hindu population was more than twice as large in the control group at baseline (Chi^2 , $p < 0.001$).

BINP experienced a similar problem in its “newly married couples” study where a comparison thana had a significantly higher proportion of households with male members sending remittances from elsewhere in Bangladesh and from the Middle East. Similar thana-wide experiments in the country’s new National Nutrition Program will seek, wherever possible, to divide particular homogeneous thanas into two halves. One half will serve as a control population, and, where appropriate, a strip of the thana dividing the two halves will be excluded to reduce problems of project related communications from the project to the control area.

Table 2. Demographic Characteristics: Baseline and Midterm Evaluations of BINP

	Baseline		Midterm	
	Project	Control	Project	Control
Population	501	202	5,197	1,784
Religion (percent) *				
Muslim	91.4	79.2	92.0	89.9
Hindu	8.6	20.8	7.8	10.1
Christian	0.0	0.0	0.2	0.0
For children < 2 years of age				
Age (mean \pm SD in months)	12.4 \pm 6.7	12.5 \pm 6.9	11.5 \pm 6.4	11.3 \pm 6.5
Gender (percent)				
Male	49.3	50.7	51.3	51.3
Female	51.0	49.0	48.7	48.7

*For project versus control at baseline, Chi², p< 0.001

In large-scale nutrition projects in neighboring India, control groups have not been utilized in project evaluations for other reasons. In the Tamil Nadu Integrated Nutrition Project that operated in South India from 1980 to the late 1990's, control groups were originally identified, but then, for ethical and political reasons, were incorporated into the project before a major evaluation had taken place. In the Integrated Child Nutrition Service (ICDS) project, the very scale of the project made control group selection difficult at that point in the project's development (the mid 1990s) when the issue was considered. Given that the project covered, at that time, over 75 percent of the development blocks in the country, it was considered unlikely that control areas from the remaining development blocks could be identified which would not be subject to suspicions of bias simply because they had not chosen or been chosen to participate in the project earlier.

2. Anthropometric Measures and Their Interpretation

Independent t-tests of equality of means for each anthropometric indicator suggest that, in project areas, the average weight for age median (WAM), and height for age z- score, (HAZ), of under-two children increased significantly between the baseline and midterm ($p < .001$). Analysis of WHZ, however, showed no significant improvement (see Table 1 and Figure 1).

In control areas, average WAM and HAZ also improved significantly between baseline and midterm ($p < .01$ and $p < .001$ respectively). Yet WHZ-scores were significantly lower at midterm than at baseline, ($p < .01$). This is consistent with trends in national data indicating that, between the mid-1980s and mid-1990s, Bangladesh experienced a 25 percent decrease in stunting and a 20 percent decrease in underweight prevalence but a 12 percent *increase* in wasting (see Table 3).

Does this phenomenon indicate a shortcoming in the project? An examination of the BINP data indicates the possibility that the lower weight for height ratio emanates from the fact that the rate of decline in stunting (height for age) exceeds the rate of decline in underweight (weight for age.) In other words, both heights and weights for age are improving, but the former is improving more rapidly than the latter. The question at hand then, and perhaps worthy of investigation, is whether this statistical decrease in the weight for height ratio has functional consequences for these children who, on average are getting taller, are weighing more, but are slightly thinner.

3. Baseline Data Necessary to Assess Progress in Meeting Project Objectives

Often, large-scale projects set numerous objectives but fail to collect baseline data on indicators for each of them to permit subsequent evaluation. Those indicators most often missing, as in BINP, relate to biochemical measurements associated with micronutrient

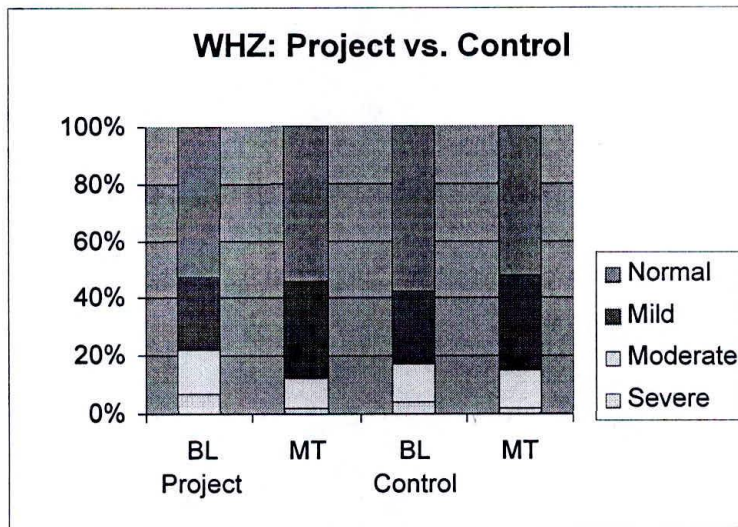
Figure 1: BINP Weight-for-Height Evaluation Data

Table 3. National Trends in Child Anthropometry

	1985-86 (percent)	1995-96 (percent)
Stunting	68.7	51.4
Wasting	14.8	16.6
Underweight	71.5	57.4

Source: (Dhaka University, 1986, 1996)

deficiencies and to pregnancy outcomes. In the case of biochemical measurements (e.g. blood samples to assess hemoglobin and serum retinol, urine samples to test urinary iodine, and, in some cases stool samples to test for parasitic infection) problems are technical and budgetary. Additionally, individuals are frequently reluctant to submit to invasive procedures.

In the case of pregnancy indicators, a problem is the length of time necessary to collect pregnancy weight gain or birthweight data. Perhaps for the first time in a project of this size, BINP assumed the challenge of collecting birthweight data in its mid-term evaluation survey -- despite the absence of such data at baseline. Like pregnancy weight gain data, such data cannot be collected in the few days a survey team normally allocates to a given area. In the case of the BINP mid-term evaluation, teams were posted at thana headquarters and were informed, through community and NGO networks, when a delivery had taken place so that weights could be taken. To be fully effective, of course, such data need to be linked by household number to other data that have been collected on these households.

An additional challenge posed for the baseline survey of the new National Nutrition Program is how to collect baseline pregnancy weight gain data (at least two successive monthly pregnancy weighings per individual) from communities, *prior* to the organization and initiation of community-based activities by a community nutrition promoter.

Complicating Factors

Experience with BINP and other project based surveys indicates that addressing these major issues may be complicated by multiple contractors, by inconsistencies between measures used in monitoring and evaluation systems, and by inadequate data cleaning. These complicating factors are reviewed briefly below.

- a. **Multiple contractors** – It is often the case with projects financed by large donor organizations, that requests for proposals are issued and proposals considered for one evaluative survey at a time. This has to do both with donor agency budget cycles and with a reluctance, for quality control purposes, to issue single long term contracts for such purposes. The unfortunate result is that different contractors are often selected for baseline and subsequent surveys, usually leading to serious problems in subsequent analysis. This was the case in BINP where, despite considerable vigilance by project management, differences in survey methodologies, and questionnaire framing resulted in an inability to compare data from the two surveys. This was particularly costly on data relating to socio-economic status and to the age of introduction of complementary food.

Based on this experience, the follow-on National Nutrition Program will be hiring a single contractor with ongoing responsibility for all such surveys. Such a single ongoing contract has the additional advantage of permitting familiarity with a

project's ongoing monitoring system assessing project implementation and the delivery of services. Quality control measures often can be incorporated into such contracts to satisfy donor requirements.

- b. Consistency of monitoring and evaluation indicators** - From the outset of the project, BINP's monitoring system utilized WAM and the Gomez classification in its management information system⁷. Accordingly stakeholders in the project became familiar with the WAM definitions and emerging numbers. Despite the advantages of z-scores, particularly in project evaluation, z- score percentage figures for severe and moderate malnutrition are inevitably much higher than WAM percentages as well as confusing. (Utilizing z-scores and defining severe malnutrition as $<-3SD$, would be roughly equivalent to 67 percent of WAM, as opposed to the WAM definition of 60 percent.) As in the case of switches to the metric system, would there be value in using z- scores and standard deviations for all analysis in the new National Nutrition Program? It is, in any case, essential that there be consistency within a project in the indicators used for ongoing monitoring and for evaluation purposes.
- c. Data cleaning** – Given major time pressures on baseline and evaluative surveys (the former frequently is necessary before project activities can be initiated), data cleaning proceedings are sometimes shortchanged. This was the case in BINP. The result was an overestimate of severe malnutrition at baseline of 30.2 and 35.7 percent in project and control groups, respectively (see Table 4).

Although the pressure of time constraints is understandable, the resulting exaggerated estimates were, indeed, the ones utilized for decision-making in the early stages of the project and for subsequent comparisons with mid-term evaluation data. Some data entry programs, commonly used by nutrition projects, can hold a limited number of data points, thus requiring more than one data set for all variables from a survey. When this happens, it is paramount to clearly label a unique identifier, either as a single variable or as a series of variables that will allow these data sets to be linked for analyses. Equally important is to keep a written description of this variable or set of variables for future use or when sharing datasets with others. Lack of a written description may lead to loss of valuable data.

Another common problem found in maintenance of project data files, and related to data cleaning, is lack of a data dictionary, a document providing a clear description and exact location in the data files of each variable. A data dictionary can also present acceptable ranges for each variable. Any observation outside this range warrants further examination by cross-tabulation with other variables, by returning to the original questionnaire, by extrapolation of an acceptable variable, or, when a reasonable adjustment cannot be made, eliminating the data point from the set. In cases where a considerable number of observations lie outside of an acceptable range for a given variable, data collection methods should be reassessed.

⁷ Management information systems are often computer based systems located at project headquarters. They serve as a data base for project analyses and, in turn, are used to inform management actions to improve the efficiency of project activities.

Table 4: Comparison of Tufts Analysis with Originally Reported Baseline Data

	Initial Analysis		Tufts Analysis	
	Project	Control	Project	Control
	<i>(percent)</i>	<i>(percent)</i>	<i>(percent)</i>	<i>(percent)</i>
Underweight (WAM)				
Normal	20.3	17.5	18.2	16.8
Mild	35.6	39.8	39.1	40.6
Moderate	31.6	31.3	33.1	34.2
Severe	12.5	11.4	9.6	8.4

At a minimum, before releasing results, data should be cleaned by checking ranges and cross checking for consistency between variables by means of cross-tabulations.

Conclusions

The analysis of data from the Bangladesh Integrated Nutrition Project has uncovered a number of challenges which need to be faced as projects of similar magnitude are launched in developing countries. In some cases solutions are readily apparent. In others further assessment is necessary. This appears to be the case where researchers need to control for child growth (when this exceeds secular trends); where weight-for-height measurements can be confounded by more rapid changes in other anthropometric indices, as in Bangladesh; and where consistency needs to be established in the standards used for monitoring and evaluation.

References

- Beaton G.H (1990). "Design of Nutrition Monitoring and Surveillance Systems: Questions to Be Answered," *Journal of the Canadian Dietetic Association*. 51 (4): 472-4.
- Dhaka University (1986, 1996). "Child Nutrition Surveys of Bangladesh." Mimeo.
- Gorstein J, Sullivan K, Yip R, de Onis M, Trowbridge F, Fajans P, and Clugston G (1994). "Issues in the Assessment of Nutritional Status Using Anthropometry," *Bulletin of the World Health Organization*. 72 (2): 273-83.
- Helen Keller International and Institute of Public Health Nutrition (1999). "The Nutritional Surveillance Project in Bangladesh in 1999." Mimeo.
- Institute of Nutrition and Food Science, Dhaka University (1999) "BINP Midterm Evaluation Report -- Final Report". Dhaka, Bangladesh. Mimeo.
- Mitra and Associates. (1996) "The Baseline Survey for Bangladesh Integrated Nutrition Project, Final Report" Dhaka, Bangladesh. Mimeo.
- National Center for Health Statistics (1977) "NCHS Growth Curves for Children Birth-18 years". United States: Vital Health Statistics. 165, 11-74.
- Sahn DE, Lockwood R, and Scrimshaw N (1984). "Methods for the Evaluation of the Impact of Food and Nutrition Programmes: Report of a Workshop on the Evaluation of Food and Nutrition Programmes, September 1981." Tokyo: United Nations University.
- UNICEF (1999). *The State of the World's Children*. New York: Oxford University Press.
- World Bank (2000). "Community Nutrition Project, Senegal: Project Completion Report." Washington DC: Africa Regional Office.

Working Paper 27
March 2000
Online Version
November 2002

Ines Reinhard
K.B.S. Wijayaratne

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

PIMU Open Forum

INTEGRATED FOOD SECURITY PROGRAMMME
TRINCOMALEE

42 Huskison Street
31000 Trincomalee
Sri Lanka

phone 026-22023
22687
fax 026-22296
e-mail ifsp@lanka.net
internet www.ifsp-srilanka.org

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.

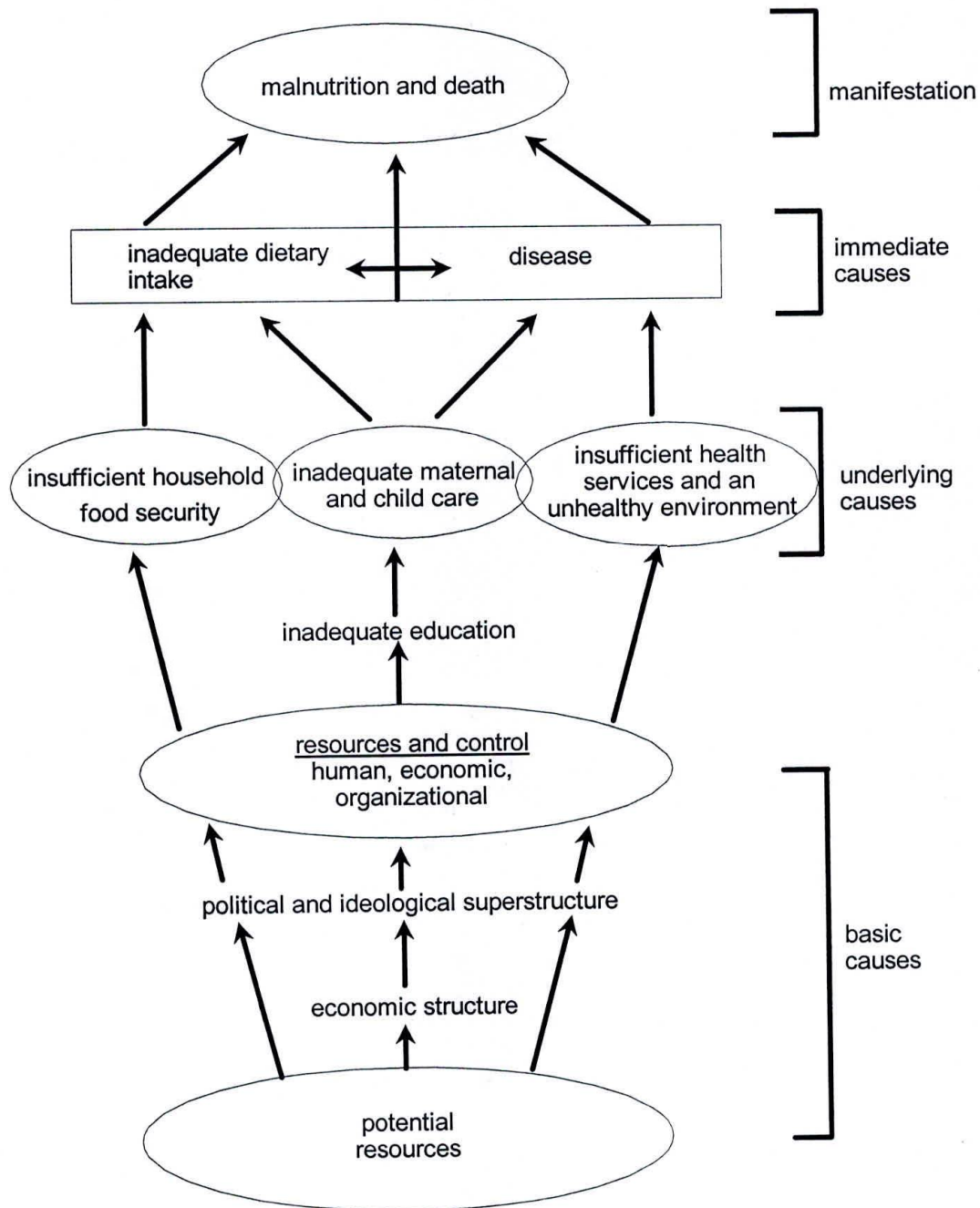
Considering the combination of the World Bank and FAO definition of food security as the most commonly used definition, this goes beyond food availability and access. Aspects such as the use and utilisation of food are also incorporated in this definition, such as diet quality and food safety, provision 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).

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

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

Children < 5 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
Adults BMI	body mass index	low food intake, hunger
TGR	total goiter rate	Iodine deficiency
Women and children 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 ¹ %	Education ² %	Income ³ %	Human ⁴ %	Stunting ⁵ %
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

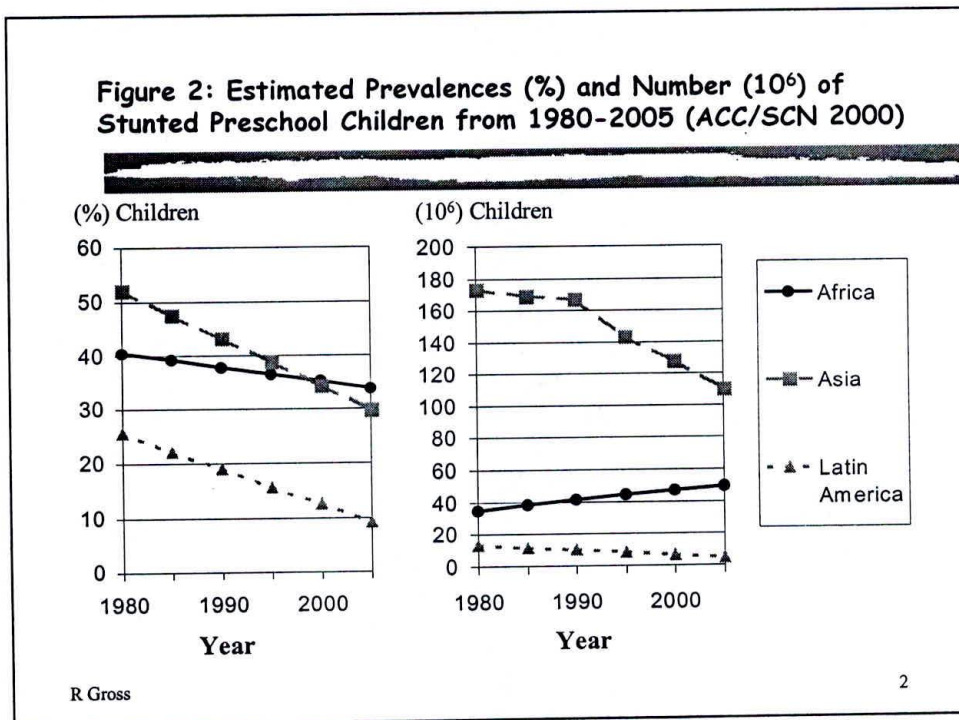
- 1 lack of access to safe drinking water and prevalence of underweight <5 children
- 2 adult illiteracy and out-of school children
- 3 World Bank 1995, based on national poverty lines
- 4 deprivations in health education and income (HDM)
- 5 prevalence of low height-for-age, Situation of Worlds Children 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 is 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 persons productivity and a childs 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 populations 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 24th 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