

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

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**Centre of Social Medicine & Community Health - JNU,  
Office of the Commissioners to the Supreme Court  
South Asian Dialogues on Ecological Democracy - CSDS  
Centre for Equity Studies**

# **Report of the National Consultation on Developing Tools for Early Identification of Acute Hunger for Effective Administrative Action**

## **Acknowledgements**

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# EXECUTIVE SUMMARY

## Background

The problem of chronic malnutrition is a curse, which 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 Centre of Social Medicine & Community Health-JNU, the Office of the Commissioners to the Supreme Court on the petition of the Peoples Union for Civil Liberties (PUCL) Vs. Union of India (UoI) & Others (Writ Petition [Civil] No. 196 of 2001)<sup>1</sup>, Centre for the Study of

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<sup>1</sup> In April 2001, the People's Union for Civil Liberties (PUCL, Rajasthan) submitted a writ petition to the Supreme Court of India seeking enforcement of the *right to food*. The basic argument is that the right to food is an implication of the fundamental "right to life" enshrined in Article 21 of the Indian Constitution. This public interest litigation (PIL) is known as "PUCL vs Union of India & Others, Writ Petition (Civil) 196 of 2001". In an interim order dated 8 May 2002, the Supreme Court appointed "Commissioners" for the purpose of monitoring the implementation of the Court's orders. The Commissioners are empowered to enquire about any violations of these orders and to demand redressal, with the full authority of the Supreme Court. They also report to the Court from time to time, and may seek interventions going beyond existing orders if required. In an order dated 29 October 2002, the Court clarified that "the scope of the work of the Commissioners appointed by this Court is to include the monitoring of the implementation of this Court's orders as well as the monitoring and reporting to this Court of the implementation by the respondents of the various welfare measures and schemes." The two Commissioners initially appointed were Dr. N.C. Saxena and Mr. S.R. Sankaran. Subsequent to Mr. Sankaran resigning from the position, Mr. Harsh Mander has been assisting the Commissioner as a Special Commissioner. The Office of the Commissioners is based in New Delhi. It is supported by funds provided by the Government of India at the request of the Supreme Court. Apart from the secretariat, the work of the Commissioners is supported by state-level 'Advisers'. ( <http://www.sccommissioners.org/aboutus> )

The "Right to Food Campaign" is an informal network of organisations and individuals committed to the realisation of the right to food in India. The campaign began with a writ petition submitted to the Supreme Court in April 2001 by People's Union for Civil Liberties, Rajasthan. Briefly, the petition demands that the country's gigantic food stocks

Developing Societies-South Asian Dialogues on Ecological Democracy (CSDS-SADED) and Centre for Equity Studies (CES) collaboratively organised 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 Defining Early Identification of Acute Hunger and Starvation for Effective Administrative Action**, was held on 13<sup>th</sup> May, 2010 at Jawaharlal Nehru University, School of Social Sciences-I Committee Room, New Delhi.

The primary objective of the identification under consideration was 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. The third purpose of this surveillance would be the mobilization of civil society and community level action on the issue of acute hunger.

Distinguished public health scientists, nutritionists, policy analysts, economists, administrators and social activists, with years of experience of working on the relevant issues, participated.

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should be used without delay to protect people from hunger and starvation. This petition led to a prolonged; public interest litigation (PUCL vs Union of India and Others, Writ Petition [Civil] 196 of 2001). Supreme Court hearings have been held at regular intervals, and significant "interim orders" have been issued from time to time. However, it soon became clear that the legal process would not go very far on its own. This motivated the effort to build a larger public campaign for the right to food. The campaign has already taken up a wide range of aspects of the right to food. Sustained demands include: (1) a national Employment Guarantee Act, (2) universal mid-day meals in primary schools, (3) universalization of the Integrated Child Development Services (ICDS) for children under the age of six, (4) effective implementation of all nutrition-related schemes, (5) revival and universalization of the public distribution system, (6) social security arrangements for those who are not able to work, (7) equitable land rights and forest rights. Subsequently, the Indian Parliament unanimously enacted a National Rural Employment Guarantee Act in August 2005, and cooked mid-day meals have been introduced in all primary schools following a Supreme Court order of April 2004. ( <http://www.righttofoodindia.org/campaign/campaign.html> )

## **Brief Summary of Each Presentation**

*Harsh Mander*

### ***Challenges in Identification and Verification of Starvation Deaths & Acute Hunger***

When speaking of challenges, there is a conscious attempt to not speak of the appropriate public policy response to starvation and acute malnutrition, but to speak about the challenges of *understanding what these phenomena are and how to define and identify them.*

Starvation is a challenge to those who live with it. There are a number of ways in which 5-10% of our poorest people survive – first, they largely cut back on food intake; the second broad category of responses is consumption of ‘pseudo foods’ from the environment; the third broad category is making desperate choices, like putting your small children out to work, getting into bondage, migrating under difficult circumstances, and a desperate choice that destitute old people are forced to make is that even though their frail body makes it very difficult for them, they still have to work to stay alive.

Regarding the public policy challenge, there is a famine code still in use in many states and District Collectors are guided by it, but there is no starvation code. One of the things the Commissioners’ Office has tried to do is to develop a Starvation Code, to define the duties of public officials when there are people in destitution and hunger. However, for a starvation code to come into force, there has to be an agreement about what is meant by starvation. There are a few typical public policy responses to starvation. The first response is active subterfuge and lies, the second is hot angry denial, and linked to this is blaming of the victim, and the third response is of indifference. And there is poor knowledge, technical as well as administrative. The net outcome is that the public policy response leads to an enormous humiliation of that family.

A point the Commissioners’ Office has put into the starvation code is that when there is an allegation of death, instead of investigating the death there should be an investigation of the surviving family and others similarly placed as that individual – are there people *living in conditions of starvation?*

And the core of the debate is the challenges to the socio-medical fraternity. There are a series of questions here – what is hunger? How do we define starvation death and how do we define living with starvation? How many calories are required for an adult to keep physically alive at zero activity? Are we only speaking about calories? What about other nutrient requirements? Can we have a definition of destitution, taking into account socio-economic conditions? What is the difference between acute malnutrition, Severe Acute Malnutrition (SAM) and starvation? Does not death result from acute malnutrition layered on a foundation of chronic malnutrition? Is not starvation a combination of chronic and acute? Can we define this more precisely?

Starvation in children does exist, but also in old neglected people without care, in single women-headed households where the woman tends to starve to death, in disabled-people headed households, and sometimes where there are disabled children. Let us evolve definitions and tools for identification which apply to all of these.

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*Ritu Priya*

***Overview of Public Health Approach to Early Detection of Acute Hunger: The Challenges & Possibilities***

The challenge is that among children in the 0-6 years age group, 50% suffer from moderate and severe malnutrition, and when mild, moderate and severe are seen together this figure increases to 75%. Among adults, 40% are chronically energy deficient and at the level of households, 40% deficient in calories. 65% child deaths have mild-mod-severe malnutrition as an underlying cause, and 15% child deaths have severe malnutrition as an underlying cause.

**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; this 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 last point is the condition of concern for today's discussion.

### **Acute on Chronic Undernutrition**

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

### **Types of Hunger**

When talking of hunger, there are different types and usages of this term. Psychic/hedonistic hunger. Incomplete need. Hidden hunger. Starvation.

When we look at hunger and deficient food intake collectively, a classification of communities/populations by nutritional emergency status could be made:

- Whole village/community near destitution, hunger and starvation;
- 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.;
- Varying proportions of these various economic classes require 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 intake, ranging from 10% to 80%.

### **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. Varied proportions of varying needs at local levels means that the local community and community action is likely to affect implementation, e.g., in some instances the better-off could provide some support to the poor through community action.

### **Broad approaches to deal with malnutrition and acute malnutrition**

- Macro level – Deal with the macro issues of employment and food availability/access. Universal PDS, agriculture, etc., are the solutions.
- Micro level – Individual/household level identification of the most vulnerable and addressing their situation urgently on an individual basis. Special focus on the most vulnerable such as destitute households, 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.

We need to mediate between these three, it is not either-or, all of these need to be done. And the meso level is something we have not addressed at all.

### **Possible Methods for Identifying Community Level Acute Food Deficits**

Existing Methods in Official Use:

1. Starvation death as marker of household hunger and destitution
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’], e.g., by the NSSO’s annual survey rounds

Proposed Additional Methods:

4. Market off-take – from Public Distribution System (PDS) + market – declines relative to previous years in a year of normal or low production.
5. Anthropometric indicators. The Integrated Child Development Services (ICDS) system is there with all its weaknesses but it is meant to be giving us data on the weight of children.

Can we develop that into a collective indicator for saying that the community is getting into hunger?

Anthropometric indicators at individual level

- Adult/Children
- Weight for height/Height for age/Weight for age/Body Mass Index (BMI)
- Gomez classification, National Centre for Health Statistics (NCHS) standards/Z-scores/WHO standards.

Anthropometric indicators at a collective level

- Sentinel surveillance for declines in anthropometry, e.g., 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.

There exist diverse scientific and administrative paradigms, which function either with *holistic* or *reductionist approaches*, and this reflects how they look at public policies and deal with it.

The holistic approach – plurality of approaches; recognising contextual diversity; macro to micro levels of data and action; triangulation for multi-dimensionality of context; uncertainty and subjectivity is recognised; decentralised information and database as well as community level action; complementarity of action segments – administration, academic, civil society organisations, community.

The reductionist and partial approach – 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 databases with centralised management; supremacy of one's own role/discipline emphasized – little dialogue.

We have to set out the criteria that we will go by. There must be a plurality of approaches, context-specific approaches rather than universal answers, have to include the whole continuum.

Therefore, action will have to be at multiple levels, contextualised rather than nationwide rigid programmes.

.....  
*Vandana Prasad*

***Guidelines by the Jan Swasthya Abhiyan Hunger Watch Group on Verification of Starvation Deaths & Detection of Hunger in the Community***

The Jan Swasthya Abhiyan (JSA) Hunger Watch Group believes that this issue is fundamentally an issue of politics and not really a medical or technical issue. There was a context in which we created this tool for the diagnosis of starvation deaths. In 2003, when the country was experiencing drought, crop failure and suicides, not a single death in the country had been defined and acknowledged as a starvation death by the processes that exist to define causality of death. Working in public health, it was evident to us why there is absolutely no causality data for death – the nature of the death certification process by the medical fraternity, the current medico-legal system, diktats within government, and a lack of understanding between these various systems. Also, the practice of defining starvation death through doing autopsy whereby it would be stated that there was food present in the intestine and, therefore, it was not starvation death, did not enable any death to be certified as caused by starvation.

There was close interaction between the Right to Food Campaign (RTF) and JSA for this exercise, and several other scholars and activists were also part of it. We were very conscious of the fact that not only is this political, but if we are going to approach it from a socio-medical perspective, then it must possess a scientific/academic weight and rigour. People from forensics, social scientists, and many of us medical-social activists were involved in this exercise. The objective of the tool was to systematically investigate and document starvation deaths. We were also thinking tactically, and the reason why starvation deaths was used as a concept was because that was what caught the eye of the public.

In the Hunger Watch group we insisted that we would focus on a community diagnosis, of a starving population, and not just relief for one person or one particular family. It is important to

note that it is easier to do all this for adults than it is for children; children provide a very complex challenge, medically as well as socially. We used the Pyramid, or the Iceberg, approach continuously.

What we did at the level of the community:

- Documented death rates. Using an epidemiological method, pointed out if the death rates within a particular village or district at this moment in time are much higher than a representative similar district or village nearby suffering from similar conditions.
- Used anthropometric indicators, to show that they are much below the state average.
- Used the fact that there has been no mass disaster or accidents.
- Noted the fact of reduced food offtake from PDS.
- Noted other indicators of reduced food security, like eating unusual foods, increasing indebtedness, large-scale outmigration for work, etc.
- Used dietary histories. Calculated 850 Kcals for adults as being the limit for starvation, which means that this is the minimum you need to just be alive without activity.
- Used verbal autopsies.

Thus we used a combination of statistical, anthropometric and social tools, as well as verbal autopsies as a very specific and telling kind of tool.

The schema for children was somewhat similar. We looked at:

- Increase in death rates among under-five children, compared to the state under-five mortality rate.
- Siblings of the child that died; one can use as a proxy the situation of the siblings of that child – are siblings malnourished?
- Data of the child that has died from the anganwadi/ ICDS register.
- Physical descriptions of the child – did the child have a pot-belly, child's hair colour, etc. This could be done in the verbal autopsy too.
- Also, looked at the very important issue of infection. Because when you say 'cause of death' the government invariably says the child has died from an infection. We decided to compare known mortality from diseases in well-to-do children and see this mortality

alongside it – it is usually ten to twenty times higher, and obviously this cannot be the mortality from the disease process alone.

We used the Indian Association of Pediatrics (IAP) classification because the ICDS was using this at the time. When ICDS shifts to WHO standards and uses a Z-score, we should update this IAP and weight-for-age depending on what is currently being used within the system. We also need to add perhaps Mid-Upper Arm Circumference (MUAC) to this, because SAM is a concept and a tool that has entered the discourse now.

The functionalities of how to make this happen:

- Initial contact with the community
- Learning about villages affected
- Getting total reports of starvation deaths
- Selection of the village/villages or hamlets to be taken up for study
- Assessment of the death rates in these communities during specific recent periods
- Anthropometric measurements of a sample of adults and children
- Dietary surveys to assess adequacy of food intake in sample families – which could perhaps be done in the same families where the anthropometric survey has been done
- Assessment of any deterioration in food security schemes
- Assessing ICDS records
- Verbal autopsies

The lack of using the ‘underlying cause of death’ space within death certification constantly created situations where not a single death was registered as caused by malnutrition.

The structure of the report was planned to be –

- an introduction
- the under-five mortality rate
- the death rate
- the estimation of malnourished children
- details of starvation deaths among adults
- community situation of food security
- the hunger pyramid

- recommendations as to what to do

The hunger pyramid – at the top are starvation deaths and description of the deaths that have occurred, underlying that is the starving population, i.e., adults having 850 Kcals or below. And before the concept of SAM came, the way we dealt with children in the original report was to say that a child in any family where an adult had minus 850 Kcals. And below that comes all malnourished. The point about those falling under ‘mild’ malnutrition is extremely important and critical, so here ‘mild’ had been included in the ‘malnourished’.

Soon after this, we did a training with about 50 activists from different parts of the country. The Hunger Watch Group itself did not meet again, but many of the groups that came to the training adapted this tool; not completely, but many used it in some way. Generally, they used anthropometry, studied offtakes from food-related schemes, and dietary intakes, etc. Such a process eventually led to the demystification of anthropometry.

Some thoughts as to why the group did not go ahead. It required too much time, money and effort to follow up with surveys. We felt that through trainings at least we could do something. Though many members in the RtF campaign did continue to use this tool on their own, there was no coordinated activity. Also, perhaps, it was too technical; it definitely needed the intervention of doctors at some point.

The Commissioners’ Office having taken this tool on and having put it into the Supreme Court petition, is hugely valuable. And thanks to the invitation to present this work at this consultation, we feel we should get together again and update this tool.

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## **Main Discussion Points**

1. Starvation is an outcome of the concentration of acute denial of nutrition on a foundation of prolonged food denial and also other nutritional parameters. It is not an isolated sudden episode; it is an acute episode imposed on a chronic nutritional deprivation and unavailability. If we have to identify what is prolonged food

deprivation, then starvation cut-off must be placed at a point where anyone who consumes less than the Basal Metabolic Rate (BMR) for their present weight. (Ideally, it should be BMR for their ideal weight, but our population never reached its ideal weight.) There is no surveillance for adults. One has to actually propose a whole institutional mechanism and then base it on BMIs, using the BMR as the cut-off for identifying starvation. The definition of starvation death has to be calculated according to the BMR of 1200 calories.

2. Focus simultaneously on micro, meso, macro levels. Identify indicators at each of these levels. Need to articulate a meso level analysis of class, caste and social categories like landless, single women, disabled, street children.
3. Must note the issues of hunger and infection, and that infection kills appetite.
4. The question of governance. Systematic failure of state institutions, PDS, ICDS and NREGA (National Rural Employment Guarantee Act). Need to increase accountability of government functionaries at all levels, including panchayat and anganwadi workers.
5. One of our existing machineries for monitoring undernutrition in pre-school children is ICDS. Must argue for strengthening the ICDS system, and monitoring, because that system is already available. This should continue to be one of the entry points for whatever strategies we build.
6. Need to involve the community, and listen to their experience/expression. Also, the methodologies need to be operationalisable by communities, especially when there are acute situations.
7. While discussing methodologies, also need to discuss institutional mechanisms – who is going to carry out these various levels of operational tasks? How will these things translate on the ground?
8. Anthropometry can be very misleading for adults; trying to put in place a whole machinery centred on anthropometry must be weighed carefully, and put into perspective.
9. Try to do a quick a mapping exercise/survey, as we already have so much data, and this will help us to expeditiously identify which are the more vulnerable districts with a larger proportion of vulnerable populations. The District Level Household and

Facility Survey (DLHS) data shows that about 50% of the malnourished children are living in 20% of the districts. Hence these 20% districts could be the area where we first focus.

10. The technical versus political approach – along with the technical discussion must also treat this as an issue of political economy.
  - Must ensure that there is no cognitive rupture with questions of governance, of political economy, and of the social transformation agenda.
  - Need to know technical information, because government uses its technical card.
  - Need to make intelligent use of what information exists.
  - Must work towards tearing at the veil of having evidence insufficiency on your side; on the side that is the pro-poor side. This work is towards shifting the policy level debate and creating a feeling of *more needs to be done, because there is now a groundswell that understands this issue.*
11. The government knows that the people are starving; it is not for lack of any tools. But after independence, a whole way of development was being put into place where memories of famine/hunger were sought to be erased. Nutrition is not taught as a subject in any discipline and state administrators' lack of knowledge about this issue has to be seen in this perspective. The government may not know how to do it. One of the aspects is also managerial; it is not able to expend that money well, it is not able to ensure that delivery reaches the people.
12. There is a need to clarify the definitional issues regarding the terms used – hunger, starvation, acute malnutrition, etc. A physiological condition of deprivation which manifests clinically as weight loss or stunting, as symptoms of vitamin deficiency, etc. There's a physiological level, a clinical level, an epidemiological level. And one cannot forget the subjective expression of starvation, which is hunger.
13. Need to focus attention more on the immediate surviving family and the community, rather than on the starvation death.
14. Starvation is a strong word. Can it be used for all situations of 'not adequate food'?
15. Indicators [each bullet point signifies a different viewpoint on setting/identifying indicators]

- When any community or population is either borrowing food from their neighbours or is begging for food; acute or continuous unemployment in any community; unusual out-migration; regular instances of borrowing money, not repaying the principal amount or the interest on time, and the moneylenders fed-up and complaining; those having prolonged poor health or illness; quality of grain in PDS so poor that it is not suitable for consumption.
- Inflation of main staple diets of an area, and the sudden rise of prices, as an early indicator.
- Firstly, any community audit that says that a particular person or a particular family has suffered hunger and has died from hunger, has to be taken extremely seriously. Secondly, Grade III and Grade IV severe malnutrition in children is not something the community will pick up because it is chronic, but we as technical experts say that this is also starvation. Severe Acute Malnutrition (SAM), as the name suggests, would be more akin to starvation. It is very easy to say that all SAM is starvation, but one is adding to the situation and saying that all ‘severe’, even if that is ‘*chronic* severe’, is still starvation. Thirdly, the data on epidemiological diagnosis of death rates and mortalities, because the community is highly important but this triangulation of sources is very important and technically sound.
- In a situation of already chronic malnutrition when something more acute happens, how do we identify it? One could go to what’s coming from the ground... till we have a perfectly well working anganwadi system where every month you can actually monitor how many are falling into Grade III, Grade IV, or are coming out of it.
- See this as four groups of indicators:  
 One is the environment, the physical environment in terms of broad and exhaustive things. This would be the case for an acute situation, and there would also be some chronic districts.  
 Second would be poor programme delivery set of determinants, this includes food supplementation, ICDS, mid-day meal scheme, PDS, NREGA or lack of employment opportunities. These would be chronic.

Third one is more at a medical or individual level, where one is looking at starvation deaths or rates of malnutrition, which are higher than average, and we can define what that 'high' is. And this could be already existing high levels or sudden increase in level from Infant Mortality Rates.

And finally, the set of indicators which are distress signals coming from community, in terms of begging, borrowing, migration, and selling of cattle.

These 4 sets of indicators together should give a fairly good idea of how to identify communities or individuals facing starvation.

16. Must differentiate between mapping of chronic vulnerability and acute; how is each going to be examined, mapped? The indicators that would be used for the two would have to be somewhat different. Have to also take time-frame into account; definitions for malnutrition, hunger and acute poverty feasible in the short-term may not continue for the long term.
17. Need to distinguish between types of tools. One is the mapping tool, where there is an inherent problem because of the data lag, and the vulnerability mapping that one would do would be delayed by 1-2 years because it is representing the past situation. But for identification and intervention purposes in acute hunger, we need to discuss tools of different kinds, e.g., community level tools.
18. Must also think about the administrative conflicts at the centre-state level with regard to provisioning.
19. In a situation where the state is not willing to accept the figures/data. There exists district level data, DLHS-3, etc., and on the grounds of what exists we should be able to say that these are the districts which are above the national average and have to be spoken of as nutritionally vulnerable, and these are the steps that need to be followed. We begin working on what data is accessible broadly to everyone and maybe a smaller group could identify what more data refinement is needed.
20. We should push in the direction of long-term data collection systems that the state should put in place, and have critical information coming in at the panchayat level.

## **Conclusions**

The overall consensus has been that the tool, to begin with, should be developed such that it can be used by local organisations to highlight situations of distress for particularly vulnerable groups that they are working with. Something that they can use to advocate with the local administration for immediate relief for certain households or populations or sets of communities, based on their already existing work with these communities or populations.

The consensus was that there should be an identification of vulnerable populations on the criteria of consistently reported starvation deaths, the fact that they are Scheduled Castes/Scheduled Tribes or Primitive Tribal Groups, and essentially using a lot of existing data. And the understanding is that the local organisations will be working with the vulnerable populations and watching for signs of distress. And these signs of distress could be classified, those that are agreed upon, in terms of those at the community level and those at the household level.

What could be seen at the community level includes – prevalence above the national or current state average of SAM and severe undernutrition for 0-6 year-olds; increased distress migration in the population; decrease in market offtake of food, which includes PDS and open market. One of the things that was consistently discussed and decided was that anthropometric measures for adults would be misleading, because given the current levels of BMI, which are already existing in large sections of the population, we do not expect any sudden drop in weight. Therefore, anthropometric measures should not be used, but more of social parameters.

What could be seen at the household level – distress sale of assets; begging for food; consumption of pseudo foods; distress borrowing from moneylenders, or as someone said refusal by moneylenders to lend any more money, but we have to think of how that can be captured; and distress migration.

How this adds to the existing work is that currently, organisations are already working with groups and they would have a good sense of the fact that certain groups are in distress and something needs to be done. The advantage of the tool is that it will help them to present their case. Specifically, if it is approved at the national level as a sensible method to do this, and if

they follow this method, it will bring system and rigour to that work. Therefore, this can be used, at least in the beginning, to advocate for relief for these groups.

### **Future Collaborative Work**

It was agreed that the building of these parameters would be undertaken by a group of the participants who are interested to follow up on this discussion in a voluntary capacity. The tools would be tried out and widely disseminated for further inputs and use. The offices of the Supreme Court Commissioners, the CSMCH, SADED and CES would involve others in the use, validation and refining of the tools. The tools can be used by civil society organizations to advocate for relief measures, bringing rigour and credibility into their efforts. It could also provide the basis for setting up a local to national level nutritional surveillance system capable of early identification of food deficits and rapid responses.

# FULL REPORT

## BACKGROUND TO THE CONSULTATION

The Centre of Social Medicine & Community Health-JNU, the Office of the Commissioners to the Supreme Court on the petition of the Peoples Union for Civil Liberties (PUCL) Vs. Union of India (UoI) & Others (Writ Petition [Civil] No. 196 of 2001)<sup>2</sup>, Centre for the Study of Developing Societies-South Asian Dialogues on Ecological Democracy (CSDS-SADED) and Centre for Equity Studies (CES) collaboratively organised 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 Defining Early**

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<sup>2</sup> In April 2001, the People's Union for Civil Liberties (PUCL, Rajasthan) submitted a writ petition to the Supreme Court of India seeking enforcement of the *right to food*. The basic argument is that the right to food is an implication of the fundamental "right to life" enshrined in Article 21 of the Indian Constitution. This public interest litigation (PIL) is known as "PUCL vs Union of India & Others, Writ Petition (Civil) 196 of 2001". In an interim order dated 8 May 2002, the Supreme Court appointed "Commissioners" for the purpose of monitoring the implementation of the Court's orders. The Commissioners are empowered to enquire about any violations of these orders and to demand redressal, with the full authority of the Supreme Court. They also report to the Court from time to time, and may seek interventions going beyond existing orders if required. In an order dated 29 October 2002, the Court clarified that "the scope of the work of the Commissioners appointed by this Court is to include the monitoring of the implementation of this Court's orders as well as the monitoring and reporting to this Court of the implementation by the respondents of the various welfare measures and schemes." The two Commissioners initially appointed were Dr. N.C. Saxena and Mr. S.R. Sankaran. Subsequent to Mr. Sankaran resigning from the position, Mr. Harsh Mander has been assisting the Commissioner as a Special Commissioner. The Office of the Commissioners is based in New Delhi. It is supported by funds provided by the Government of India at the request of the Supreme Court. Apart from the secretariat, the work of the Commissioners is supported by state-level 'Advisers'. ( <http://www.sccommissioners.org/aboutus> )

The "Right to Food Campaign" is an informal network of organisations and individuals committed to the realisation of the right to food in India. The campaign began with a writ petition submitted to the Supreme Court in April 2001 by People's Union for Civil Liberties, Rajasthan. Briefly, the petition demands that the country's gigantic food stocks should be used without delay to protect people from hunger and starvation. This petition led to a prolonged; public interest litigation (PUCL vs Union of India and Others, Writ Petition [Civil] 196 of 2001). Supreme Court hearings have been held at regular intervals, and significant "interim orders" have been issued from time to time. However, it soon became clear that the legal process would not go very far on its own. This motivated the effort to build a larger public campaign for the right to food. The campaign has already taken up a wide range of aspects of the right to food. Sustained demands include: (1) a national Employment Guarantee Act, (2) universal mid-day meals in primary schools, (3) universalization of the Integrated Child Development Services (ICDS) for children under the age of six, (4) effective implementation of all nutrition-related schemes, (5) revival and universalization of the public distribution system, (6) social security arrangements for those who are not able to work, (7) equitable land rights and forest rights. Subsequently, the Indian Parliament unanimously enacted a National Rural Employment Guarantee Act in August 2005, and cooked mid-day meals have been introduced in all primary schools following a Supreme Court order of April 2004. ( <http://www.righttofoodindia.org/campaign/campaign.html> )

**Identification of Acute Hunger and Starvation for Effective Administrative Action**, was held on 13<sup>th</sup> May, 2010 at Jawaharlal Nehru University, School of Social Sciences-I Committee Room, New Delhi.

### **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 Integrated Child Development Scheme (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', i.e., 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 mobilisation 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 recognises 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, i.e., 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 (10 kg 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 Jan Swasthya Abhiyan (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. UoI 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 from 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 work 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 work. 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 foodgrain 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.

### **Plan for the Consultation**

Thus, the consultation was planned to have two main sessions; one session for discussion of the definitions of hunger and starvation as well as presentation of the methods for identifying starvation deaths, with initial presentation of the various methodologies. The post-lunch session would deal with tools other than identification of starvation deaths for early identification of acute hunger at a collective level. The focus was explicitly on developing tools that enable the administration to institute emergency responses through a multiplicity of pathways.

# TRANSCRIPT OF THE SESSIONS

## Session I

### Introduction to the Workshop

#### **Prof. Rama Baru – Chairperson, CSMCH**

Welcome to this collaborative consultation being jointly organised by the Centre of Social Medicine & Community Health – JNU, the Office of the Commissioner to the Supreme Court on the Petition of the PUCL, the Centre for the Study of Developing Societies — South Asian Dialogues on Ecological Democracy (CSDS-SADED), and the Centre for Equity Studies.

The idea of this consultation is to address the issue of early detection of starvation. This is a forum to discuss and develop socio-medical tools for early identification of acute hunger and starvation for effective administrative action.

We have with us today several distinguished scientists, nutritionists, and social activists. The idea for this consultation was conceived by Prof. Ritu Priya. And I now invite her to speak.

#### **Prof. Ritu Priya**

We are very pleased to see that we have around the table not only several academics but also administrators who handle these issues on the ground. An interface between these various groups is important. This interface has happened over the years, but somehow, the issue of acute malnutrition and hunger seems to have fallen through the cracks in many ways. We have ways of identifying and dealing with *chronic* malnutrition, but *acute* malnutrition has usually been dealt with either in terms of starvation or as per the current developmental and child health jargon as MAM, SAM and GAM (Moderate Acute Malnutrition, Severe Acute Malnutrition, and Global Acute Malnutrition, respectively). On one hand, we have approaches which look at universal PDS and food security and such macro issues; on the other hand, we have absolutely micro issues of MAM and SAM. There is a need to look at acute malnutrition as a collective phenomenon. This has not got adequate attention, especially at a time when last year we have

faced drought conditions and have seen the kind of price rise we have had this year. This should alert us to the possibility of impending large-scale acute malnutrition and all its consequences.

At a consultation with administrators and civil society members in the beginning of this year at the A.N. Sinha Institute at Patna (organised jointly by South Asian Dialogues on Ecological Democracy, a project at the CSDS, Delhi and the A.N. Sinha Institute of Social Sciences), administrators asked us as technical people – can you tell us exactly what to do if we want to prevent acute hunger in my community? Can there be exact answers? That set the tone for us wondering if we could look at the various dimensions of this issue as a separate process in itself.

There are two dimensions to this – identification of those suffering from acute hunger, and responding to it. Response is the crucial part, but can happen only after recognition and identification. And so today is focused on acute malnutrition, on definitions for identification, verification and methods to do that. Methods not only at a level where one can study it in-depth, but with rough and ready tools that administrators can use to act immediately when acute malnutrition is happening at a large scale. The post-facto studying of dimensions is important, but the action has to happen early if we want to do something about prevention. So, the focus today is not on chronic malnutrition, which is the big picture, and very importantly so, but today the gap we are trying to address is in developing tools for early detection of acute hunger at community level.

A lot of activity has happened in this area in the last few years – seminal work has been done by the JSA's Hunger Watch Group and the Supreme Court Commissioner's Office. But somehow this does not seem to have been taken note of by the mainstream public health, nutritionists, or the civil administration and policy makers. And those are areas where we need to bring this focus again.

Today, the morning session deals with work of these two bodies and technical dimensions of defining starvation, and the tools they have developed for identification of starvation deaths. As they share their experiences of using these definitions and tools, other participants could discuss what they view as the strengths of the approach they have adopted, and what cautions or

limitations do they envisage by use of the tools they have developed. Then we can discuss what more needs to be done.

Another dimension we introduce in the morning is that starvation death gives us one way of identifying the fact that there is acute hunger in the community. Can there be other tools that can be used by civil administration to do this early enough and take preventive action? We will be presenting some ideas on what is possible and we would like participants to look at the inability or desirability of those methods – do they need to be developed more – this will be the purpose of the afternoon session.

We start with Harsh Mander and experience of the Commissioner's Office. Then I will make a presentation coming from a public health perspective, attempting to clarify some of the issues which are important for coming together on a common platform. One finds a lot of definitions and languages as we come from different disciplinary and experiential backgrounds. Then Vandana Prasad will talk about the JSA model, how they developed a guideline, and the technical as well as social considerations behind that. Then open floor. We will go around the table, take each of the proposed methodologies and discuss them threadbare, and think of future possibilities. What kind of work would be required in the future to prevent hunger and starvation rather than studying it post-facto.

The material in folders shared with all of you includes reports on starvation deaths from the Commissioner's Office, JSA guidelines on investigating a starvation death, some papers from the nutrition and public health fields showing links between various types of malnutrition, health and disease, and implications of this for administrative action. Bulky reports are available on display outside, and can be made available on request.

### **A Round of Introduction of Participants**

## Technical Session I – Challenging the Technical Experts

Chair – Dr. N.C. Saxena, Supreme Court Commissioner

*N.C. Saxena*

The problem of hunger and malnutrition has been endemic in India for several decades, but has aggravated since the last 15 years. Many factors – most important would be the sluggish production of agriculture and foodgrains in India. If you look at the macro picture, you find that per capita foodgrain production has declined; it used to be 207-208 kg per annum per capita in the mid-90s, now it's about 186-190. On top of this, if you look at the Economic Survey, about 10-14 million tonnes of foodgrains are being exported. Which means the availability has further declined. This is also reflected in the data of consumption of cereals by NSSO (National Sample Survey Organisation), which shows per capita consumption of cereals by the top 20% of our population is 11 and a half kg per month per capita, but by the bottom 20% in rural India is only 8 and a half kg. There's a big difference of 3 kg per capita per month consumption of cereals, despite the fact that the poor do more hard work and have less access to other forms of food, pulses, meat products, poultry, fruit, milk, vegetables. Therefore, there is sufficient data to show that hunger and malnutrition have perhaps got more aggravated in the last 15 years.

Unfortunately, this is not accepted by the state government. GOI may be saying 46% children are malnourished, out of that 17% are severely malnourished. But state government data shows a very different picture. It shows the number of malnourished children has declined from 1995 to 2005 from something like 18% to 8%; out of that only 1% children are severely malnourished. So the view is – where is the problem?!

Since this is the data of the state government, I think our first job is to make the system realise that this is all *bogus data*; this is deliberately under-reported in order to escape any attention by the media. Unless there is a match between the NFHS (National Family Health Survey) data and the state data, this problem of denial by the state government would continue. I see this as a very serious problem, that the state governments do not accept that the number of severely malnourished children could be more than 1%. In many blocks, I have seen that it's even less

than 1%. I remember in Kalahandi the average was only 1.2% - the hungriest district of India reporting only 1% of children as severely malnourished! That is what the state government is reporting.

The last point I want to make is that there is a problem of governance. When we look at the profile of the Department of Women and Child Welfare, one finds that at the state level it is not considered to be an important department. What is worse is, in the last few years, after the Supreme Court's attention to this issue and after we succeeded in increasing the budget allocation for nutrition, the net result has been just the reverse. The department is now being seen as a place where a lot of money can be made in a short time; right from the anganwadi worker upto the CDPO (Child Development Project Officer), and everyone in between feels the same way.

So the net result of our efforts has not been very positive. And of course, the ICDS suffers from a serious flaw, in that it does not look after the age group of 6 months to 2 years, which is the main age group we should be addressing. It focuses on the age group of 3 to 6 years, where there is money to be made. So I feel that there is a need to set a protocol for identifying the hungriest and the severely malnourished, but that will not happen till the government accepts the real picture. In the government records, there is no one dying of starvation, people may be dying of other diseases, but not starvation.

So we have to work towards ensuring that the figures of severely malnourished children and severely malnourished adults are collected and these are the correct figures and they match with the NFHS figures. In fact, the problem of governance is very severe – for instance, I was addressing a meeting of about 40 MPs on these issues about 10 days back, and telling them that they should go and see things for themselves, you'll find that there are only 5-6 children attending the centre, but the records will show 100, the number of malnourished will be 'x' but the records will show another thing. And one of the MPs told me quite plainly, "But this is not the problem. The problem we face is that the anganwadi worker comes to me and says 'the supervisor is asking for Rs. 4,000/- from me per month, please get it reduced to Rs. 2,000/-.' So I am there to negotiate between the anganwadi worker and the supervisor and to see how to work

out the system in an equitable manner”. So this is how they are trying to bring equity in their own manner. This is the status of governance we need to keep in mind during this discussion. I now request Harsh to make his presentation.

*Harsh Mander – Challenges in Identification and Verification of Starvation Deaths & Acute Hunger*

When I speak about challenges, I do not mean the *content of response*. Consciously not talking of the *appropriate public policy response* to starvation and acute malnutrition, that is another whole day’s discussion, but the challenges of understanding what these phenomena are, how do we define and identify them.

I want to start by recounting a few things from my years of experiences, looking at a large number of starvation deaths in a number of states in my work with the SCC and outside it as well. The first important point to note is that starvation is a challenge to those who live with it. What challenges it poses – he shared some accounts from his experiences. For the last few years, we have tried to work with people who live with hunger as a way of life, with severe denial of food as a way of life. We discovered a number of ways in which they survive. I will briefly recount.

1. The first thing they said was largely by cutting back on food intake – going down from 3 meals to 2, from 2 to 1, from 1 to half a meal. Adjusting their bodies over periods of time where even the longing for food is somehow mitigated so they can deal with that suffering
2. The second broad category of responses we have observed is what we describe as identifying ‘pseudo foods’ in the environment. Basically, things that are available free in the environment, like grasses, tubers – which have no nutritional value, sometimes negative/poisonous impacts, but which enable you to fill your stomach and get a sense of satiation. There’s a really tragic situation, where entire sets of cultural practices exist in different locations wherein people have made adjustments in different ways. This needs to be understood much more. In different locations, there are tubers and grasses that are poisonous which people boil and fill their stomachs with, we have seen use of mango kernels, and we have read reports of children eating

mud. In parts of Orissa and AP, we have found people begging their neighbours for starch-water leftover from cooking rice, and they ferment that overnight and have that as a meal. So this consumption of pseudo foods is another category of responses for people living with hunger.

3. The third broad category we describe is making desperate choices – you put your small children out to work, get into bondage, migrate under difficult circumstances, sell your body, and various such things. Another desperate choice is that destitute old people simply cannot live without working, their frail bodies make it very difficult for them, but still they have to do it. Work is given to them as charity, and a couple of stale *rotis* in exchange for taking someone's cattle up a hill for grazing. Making completely unreasonable choices is the third way of people dealing with the lived experience of hunger. The hardest lesson people have found to teach their children is the lesson of how to sleep hungry. There are cultural practices around this also. There are narratives from people of the Musahar community in Bihar, and also found in some Dalit autobiographies, of people looking for grain in the dung of cattle, and looking for grain in the fields after they have been harvested.

This is the background in which I want to have today's discussion. This is a pattern for something like 5-10% of our poorest people. Dr. Jan Breman, who has done a lot of work with bonded labour, said something very profound to me once. He said we assume that bonded labour reflects the most desperate of our poor. But he said this is not really the case. He said you can get into bondage when you have the labour to give in bondage. What happens to people who do not even have the labour to give in bondage?

So these are the people I want to focus our attention on today.

Now moving on to the public policy challenge. Democracy has not been able to deal with malnutrition, but at least it has been acknowledged – with all the qualifications that Dr. Saxena spoke about. But the existence of hunger, individual starvation or starvation within communities, is completely invisibilised in public policy discourse. We have a famine code, which we still use in many states, and District Collectors are guided by it, but we do not have a starvation code. One of the things we have done in the Commissioner's Office is to try and develop a Starvation Code, which is trying to define the duties of public officials when there are people in destitution

and hunger. This is in the folders. We sent this to the Central Government and to the Supreme Court asking at least for some modified version of this to be applied. But I feel that for a starvation code to come into force, we have to have an agreement about what we mean by starvation. And I'll speak of this later when discussing challenges to the community of social scientists and public health practitioners.

I'll briefly touch on what is the typical public policy response to starvation.

The first one, I would say a little provocatively, is subterfuge. I recall when I was receiving training in the academy in Musoorie, one of the first lectures we were given was on tips for being a competent and effective administrator. One of the points was that it is a big nuisance when people allege a starvation death, and you should have a bag of grain in every panchayat, and as soon as there is an allegation, there should be standing instructions to the patwari that they should throw 5 kilos of grain in through the window of that house so that when people come to investigate, you can say that there was grain in the house so it cannot be a starvation death. Even though this sounds very foolish, I can say that one public policy response was not only of denial but of active subterfuge and lies.

A second is of denial, very hot angry denial which typically follows any allegation of starvation death. Linked to this is blaming of the victim. Hundreds of such investigations and you always hear 'that person was very foolish', or 'they didn't take care of their health', 'liquor', 'superstition', etc.

The third response is of indifference. Earlier there was at least a need to deny, today this has turned to indifference – 'so what?' It is not even an issue.

And there's poor knowledge, technical and administrative.

The net outcome is that the misfortune of having a starvation death in your family is compounded by the misfortune of public policy responses to that. Leads to an enormous humiliation of that family. When it becomes big news in the media, people will converge into that household, the kind of questions that are asked – the whole process is very disrespectful of

the suffering of the surviving family. And the autopsy will cut open the stomach of the dead body and seeing pieces of grain there will be denials of death from starvation

In this background, the NHRC for some years, especially in Tamil Nadu, had done a series of investigations into monitoring issues of starvation in one district. It said something which is worth considering, and we put this into the starvation code – that there should be no discussion or investigation into the question of whether a particular *death* is due to starvation. The investigation will have to be of people *living with* starvation. When there is an allegation of death, instead of investigating the cause of death, there should be an investigation of the surviving family and others similarly placed as that individual – are there people *living in conditions of starvation*? Which is closely linked to the phenomenon of destitution; which I feel is very poorly researched by social scientists. So living with hunger and starvation, is what we have written into the starvation code; and have discussed state responses and duties towards that family or community living in such a situation.

Finally, I want to come to the core of what we proposed to debate today – the challenges to the socio-medical fraternity, of which I am also a part. There are a series of questions. Definitions, firstly. ***What is hunger?*** The term that we most widely use is hunger; it has a popular resonance but many are familiar with its several problems – so for instance, is it voluntary or is it involuntary? I spoke of people coping with hunger by killing their hunger over a period of time, either by pseudo foods or by physiologically and psychologically adjusting to not having food. There's also a question of hidden hunger. There can also be no hunger at the expense of dignity or freedom. So in my opinion, hunger is not a very useful term to use in scientific discussions.

Moving onto starvation – ***how do we define starvation death and how do we define living with starvation?*** There have been many discussions, with Veena here, Vandana here, Ritu here. What I've understood is that we recognise a spectrum when one says that somebody has starved to death, or is starving. Perhaps a proposed point is – that even if a person lies completely flat with no activity at all, you will still need a certain amount of calories to keep your metabolism going. So if somebody gets even less food over a certain period of time than that which is required to keep the body alive with zero physical activity – at that level we will say that that person is

starving. Now I have a question. Firstly, are we agreed on this definition? But why are we saying zero activity? What is the logic of that? Because however badly off a person is, they have to be doing some activity to keep alive. So are we saying a person is starving when there is less food than compatible with zero activity for an adult to keep alive? I request clarity on that.

Second thing – *how many calories?* The literature suggests different ideas of calorie requirements for an adult to keep physically alive at zero activity, ranging from 800 to 1200 calories. Do we have a scientific agreement on how many calories?

Also, are we only speaking about calories? What about other nutrient requirements?

Also, the living with starvation aspect, for me this is more-or-less coterminous with saying a person/family is destitute. Can we have *a definition of destitution*, taking into account socio-economic conditions. I suggest destitution would involve long-term denial of work/paid employment, of food necessary for survival, and also related to extreme social stigma and to homelessness, especially in urban contexts. Can we work towards a sociologically and a public health appropriate definition of destitution? So if we are making the shift to investigating living with starvation, I would assume we are investigating destitution.

Few more questions – we talked about acute hunger. Is this the same as starvation? Is acute malnutrition the same as starvation? Is acute undernutrition the same as starvation? If not, what are the differences? Now, what is SAM? Is that starvation? If not, then what are the differences between SAM and acute malnutrition? What is the difference between acute malnutrition and SAM and starvation?

Then we talk about chronic malnutrition. From the public policy angle, there are Grade III and Grade IV categories, there's an entire system of weight charts, etc. Now we are being told that Grade III and Grade IV is out of date, and we should be talking about SAM. Here, where is the chronic-ness and where is the acute-ness? I'm confused. Why are we abandoning the old definitions of Grade III and IV? When we are talking of acute malnutrition, where's the chronic-ness gone? Does not death result from acute malnutrition layered on a foundation of chronic

malnutrition? Isn't starvation a combination of chronic and acute? Can we define this more precisely?

Last thing, I know our discussion will focus on children. Anecdotally, I've found starvation in children of course, but also in old people without care, in single women-headed households where the woman tends to starve to death, in disabled-people headed households, and sometimes where there are disabled children. In Andhra Pradesh, we found a strange phenomenon of many disabled children in a family, maybe because I think of marriage with uncles and many others. And where there's a disabled child, one caregiver, usually the woman is devoted to that child's care and the man tends to break his spirit. He's left as the only bread earner and he also tends to do it very erratically, and there's alcohol as well as other things. So single women, old people without care, and disability, seem to breed high susceptibility to destitution and starvation. So while we have these discussions, I'd like us to remember, along with infants and children, single women, old people, and disability also. And evolve definitions and tools for identification which apply to all of these.

For me, this consultation is important in the sense that if we expect the state to be accountable and responsible for responding to starvation, we need to work towards knowing what exactly we mean by it.

*N.C. Saxena*

Thank you Harsh, for raising a large number of important issues, especially on the need for deliberating upon certain terms. To my mind, hunger relates to lack of food, while nutrition or malnutrition is the outcome which could be related to large number of factors, including food and health. Indeed, there are several types of hunger, as Harsh has discussed. Perceived hunger, when people like us feel hungry; a poor person's hunger, to which he has grown accustomed and therefore he fails to perceive it as hunger; hidden hunger, getting some food which is lacking in nutrition. Certainly we will have more debate on this, but I now invite Ritu to make her presentation.

## Defining Hunger, Malnutrition and Starvation

*Ritu Priya – Overview of Public Health Approach to Early Detection of Acute Hunger: The Challenges & Possibilities*

This presentation will raise some issues and I'm sure much more will happen in the discussion. Thanks to Lakshmi, Kumaran and Dilip for assisting with the background literature review for this.

While looking at the problem of chronic malnutrition among children and adults, we have shifted from a point where we included mild malnutrition in our categorisation. And this suddenly halves the problem. And this itself is a problem. There is a certain technical rationale to it, because part of this mild category is one which would be normal by biological/genetic potential. But there is a large chunk within this mild category which is not normal and is part of chronic malnutrition. So we need to keep in mind this change in methodology and to see if chronic malnutrition in children is 50% or somewhere between 50% and 90%.

In adults, we see that 40% are malnourished, and also 40% of households with intakes which are low for calorie and protein. With this larger national context, it is important to identify mild malnutrition being so high (2002 National Nutrition Monitoring Bureau, NNMB, data) and that we are missing the importance of this. The importance of this being that if we are looking at IMR and mortality, child mortality itself shows the severity of impact of malnutrition, and this is a well-acknowledged fact.

Coming to definition and classification, starting with *starvation*. And at the moment I'm giving technical answers to Harsh bhai, not at an administrative level. The severest deficit is when it falls below the requirement for simple body functioning. This would be the tip of the iceberg. This is what administrators talk about. At the most, this would be a few hundreds, so the question is 'why so worried about this number when there are large numbers of chronic malnutrition?'

There's this hundred which is the tip of the iceberg, there's chronic malnutrition with all its linkages as we all know, and there's acute malnutrition. And **acute malnutrition** is by definition what happens over a short period of time, and this is seen more in terms of thinness. Thinness meaning weight decline against height. Now, this can happen just due to illness without any cut in intake and therefore that becomes a little more complex than say, stunting, which is measuring height and therefore chronic malnutrition. In this situation it can happen to those who're well-nourished and they tend to bounce back, also because the well-nourished normally have a food intake which is adequate and they have access to that kind of food, except for the fact that it was disease which brought it on and once the disease is dealt with by the body they can bounce back to normal. The problem is really of acute malnutrition in those who are chronically malnourished. **Acute on chronic** is really the problem. But when our chronic is already 50-90% of children and 40% of adults this is a huge chunk. And we do not know what percentage and who among this huge chunk is going to go into acute. And this acute is what then goes into a vicious cycle of malnutrition and disease and thereby spirals downwards in the malnutrition scale and comes to a point of death, and is that where we would say it becomes starvation? This cut-off is difficult, and this is where we need to think more. And we look forward to hearing from Vandana and the JSA group's considerations on this issue.

***So acute-on-chronic malnutrition is what I'd pose as today's main issue, and identifying when is the chronic population going into acute.*** Because that's where firefighting, lifesaving efforts would come in. That's the argument given for why SAM is important – that it's very cost-effective to only address that child who's gone into severe acute and therefore is going to die; the most cost effective is to give them food and they will bounce back and deaths will be reduced. But at a collective level if you look at this, it's not just the children with SAM who are going to go into starvation or death; this is the one which has reached that end point, after that whole cycle. But there are many more who are at that point of time undergoing the vicious cycle. If we have to do prevention, it means we have to look at the people at the beginning of that cycle and not only at the end. And therefore, then the problem of acute malnutrition achieves an important status, that a large chunk of chronic malnutrition itself being susceptible to acute, and therefore this enlarges the problem of acute malnutrition itself.

Now, hunger. **Hunger** is a term we use in English to mean that you want food now, and this is a normal everyday phenomenon. For its abnormal forms, there are various types and terms. There are different usages, e.g., psychic hunger – people who are adequately nourished, have had enough food, but still want to eat more. We see this all around us with the epidemic of obesity, etc. This is a different kind of malnutrition. What we are talking about here is undernutrition, and this is the difference I would make between malnutrition and undernutrition – in undernutrition we are talking about when you're eating half a stomach of what you need, that's hunger. That's where the problem comes in, when **the chronically malnourished are habituated to that lower intake** than the genetic potential requirement. Now is that to be called hidden hunger? Because the person may not express it, feel it as hunger. But as nutritionists, as public health people, as people dealing with what it means to growth and development of the human body, that is hunger. That is a deficiency. Then hunger does not become a feeling, it becomes a biological requirement and deficiency of that. So do we use that term? What is in current use as hidden hunger is where you have sufficient food but of poor quality and therefore micronutrients become important. **Hidden hunger** is being seen as micronutrients only. There is a bit of a problem, in that most of the people with this hidden hunger, it's a convergence between protein and energy malnutrition and the micronutrient malnutrition. And the micronutrient malnutrition cannot be dealt with only by giving micronutrients if they do not have protein and calories to deal with the other parts of it. Therefore, what do we call hidden hunger? Do we classify it just by micronutrients or according to adequate food for genetic potential?

Coming to the issue of individual and collective phenomena – are we looking at individuals with hunger and deficient food intake or are we looking at it collectively? We are dealing with this at a public health level. When we are doing SAM and MAM identification, that's individual children; we are addressing them through the feeding programme as individual children. But starvation is often a marker for a larger hunger, for a larger food deficiency. And therefore, can these be used for identification of a collective status of population groups that need to be addressed for their inadequate intake even if they are not feeling it as hunger, which then leads eventually to some members of the collective experiencing starvation and death?

If we are looking at it collectively, in our country there are *different ways in which hunger can be distributed*, and the distribution would be relevant for implementation of measures. There can be whole villages where almost 100% households have deficient food intakes, and some of the tribal communities living in distant areas are examples of this. Then there would be villages where 50% households are hungry and the other 50% are not. Then there would be others which have 20% households, living with absolute destitution and starvation, as among the Musahar households in Bihar villages. There would be others with hidden hunger, where they're not feeling it but they're malnourished. And then there would be others who are well-nourished, and we could go on to the obese category. So it is the proportions of these households that would make a difference to the kind of administrative action that can be taken. Or even societal level action. The community can take action if there is a difference in the distribution of food, but if 100% of households do not have adequate food, then there is no expectation from the community to provide for those facing starvation. So where we expect civil society and community to come in, is where there is a maldistribution within the community and therefore possibility of some sharing for those with surplus.

This pattern of distribution is just to say that there are different types of collectives with different levels of hunger. But that's where the identification would become a different matter because you would have different proportions of the various levels of hunger and malnutrition. When the state takes the responsibility of the right to food, it has to take it across all situations and households. However, it is the role of the community and community action that is likely to be affected by the varied proportions, and therefore is likely to affect implementation at local levels. Planning measures to deal with acute hunger must take this factor into consideration.

### **Approaches to Deal with the Problem of Hunger**

*Broad approaches that we have to deal with malnutrition and acute malnutrition* – there are macro approaches, which basically look at food production, availability, the whole political economy of food and access to food and its distribution. This includes the universalisation of PDS, the right to food security, and so on. There's the micro level, where we are looking at individual children and giving supplementary feeding. There's a meso level which would identify communities that have high proportion of malnutrition and hunger and therefore need

larger state support in ways that are able to get to the large numbers of households that require this input. Within those communities then you also have to identify the ones who may not be able to access it, which are the most vulnerable, the elderly, single women, disabled, and so on. Also to be included in the vulnerable are those with the social disability that comes from being maha-Dalit and other categories like that.

Within this, would one look only at one or all the other approaches? Which is what many streams are doing, those that look only at macro perspectives saying the micro are meaningless and we shouldn't waste our time on that. There are others who look at only the micro, the clinical; and nutritional rehabilitation centres that are now being put in place are examples of this. How do we mediate between these? It's not either/or, all of these need to be done. But the meso is something we have not addressed at all. And to identify those, to me, is where we need tools to be used. That's where the field administration is to come in and act.

So, if we come to the question of the administrator who eventually has to come in and do that firefighting, to identify and give relief as an emergency case, how do they perceive, recognise this problem? And the bottom line is what the district magistrate can do? Because of the diversity across the country, we do not have one-answer-fits-all. We need diversity, we need to locally contextualise, at the district level. So the question in my mind was – what is it that the DM must do to identify this phenomenon early enough and act? And we are not going so much into action today, not the 'what to do', but are asking how to find this information out.

### **Tools for Detection and Identification of Hunger and Starvation**

Now, the existing methods that we have. *One is starvation deaths*, which points out to us that a particular household has a problem and the administration gives relief. And we can argue that this means that the needs of the community around must also be investigated. The second level, which again is already in place, is *identification of drought-affected areas*. There's a protocol already set out for that, based on rainfall and production in the farm. The problem with this that has been pointed out, from the little I've read, and many others would know more on this, is that one, it takes too much time, it does mean initially a denial and then time to identify the need. But

what it also means is that it will not pick up food deficit because of high prices. It is drought that will affect it, it is production that will affect it, but with price rise it will not capture the problem.

Then there is the aspect of taking information from the people themselves if they're saying they're hungry. There are surveys which the NSSO now does with this method. In the 1970s Dr. D. Banerji used this as a tool in a survey for public health to create economic categories. We have attempted to look at the methodologies across these two – what was done in the 1970s and what the NSSO does now – there's a note on this in the folder by Kumaran. The problem with this of course is that there will be a much smaller number which will acknowledge that they have food deficiency. But what it does do is tells you the bottom line—that these are the number of people who definitely need relief, they're the ones who are recognising their hunger. This is the bottom section, most vulnerable, and where hunger cannot be hidden. They are the ones who are not eating two square meals a day; then one can start looking at destitution. There will be a larger chunk above this which is not getting counted, but if we use this method we know that we are using only the minimal and we are not using it to measure extent of chronic malnutrition, but we are doing it only to identify the bottom. But what it does need is a survey kind of format, which is needed in an emergency situation, where you cannot ask people to start doing a survey. Is there already available material or available data which is being measured and can be accessed by the civil administration? In looking at what are the *possible data sets and indicators for community level acute malnutrition and hunger*, this is what we were able to figure out.

One, in the context of prices, can we look at *market off takes* – both from PDS and from local markets? This together will tell us how much the population is buying. If that is less than what is expected to happen in that population, as compared to the experience of previous years, could we create a marker out of this? Say a 20-30% decline in offtake in a year where local production has not been good; is that therefore a marker of households getting less food? This has to be refined, but we need to think whether this would be a useful tool at all.

*Anthropometric indicators.* One is the individual-level indicators being used by the ICDS, but can we then say that declines in food seasonally more than expected in the year, can that somehow be used for identifying hunger in the community? The ICDS system is there with all its

weaknesses but it's meant to be giving us data on the weight of children. Can we develop that into a collective indicator for saying that the community is getting into hunger?

Now that we have got so many village level functionaries as well as the panchayats, could they be creating *lists of the most vulnerable* in the community? They know their community and can identify households as well as individuals who are most prone to destitution, hunger, and starvation. This will help in addition to the various methods in existence.

And lastly, when this is happening, even if you have group discussions within villages and *ask what are the changes in food they have made over the past few months or years*, you will get a sense from the households. I've done this with a group here in Delhi and heard – they have stopped using dal, or they buy half of what they used to earlier, vegetables are cut by one-fourth, and so on. These things we can pick up and inform ourselves of the severity of the problem. So these are the seven measures

I wanted to discuss whether we could use these for identification of acute malnutrition. Across these methods, how do we discuss which are good methods, which are not?

The difference between the way we are looking at it and the way the SAM and MAM discussion is posed or the starvation death is identified by no food seen in autopsy, is certitude of objective criteria; we are looking for certitude in saying the autopsy will show it definitively that if there was no food, the person was definitely starving. But when we are saying that we want to ask the community whether the person was living in hunger and destitution, it becomes a more subjective criteria, it becomes more socially-based criteria, and then it does not remain that certain. Therefore, are we ready to move into a different paradigm of science? This has been debated a lot and we have analyses of *holistic versus reductionist approaches*, whether it is the science of nutrition or public health or in the administrative structures and how they look at public policies and deal with it.

This is just putting down the various dimensions – whether one wants to use a holistic perspective against the more conventional approaches and what are usually analysed as

reductionist perspectives, as rarely does anyone say they are using a reductionist perspective. We have to set out the criteria that we will go by.

Also saying that there must be a plurality of approaches not singular; context specific approaches rather than universal answers; look from macro to micro levels, have to include the whole continuum; triangulation of several methods to classify several dimensions of hunger; for identifying individuals and households through decentralised methods, the reasons why there is hunger would be different and, therefore, the methods needed would be different, e.g., if there is drought, or price rise, these would be different. Therefore, action will have to be at multiple levels, contextualised rather than nationwide rigid programmes. So how do we look at methods of identification which take these features and criteria into account when we examine our various options?

I'll stop here, inviting discussion on the seven methods, as in the PowerPoint presentation [see PPT 'Public Health Approach to Early Detection of Acute Hunger: the Challenges & Possibilities' in Annexures]. We thought that the house could go through each method, beginning with the starvation definition. Here Vandana's presentation, and JSA's work on starvation and other issues, could throw more light on this.

### **A Holistic Approach to Identifying and Investigating Starvation Deaths**

*Vandana Prasad – Guidelines by the Jan Swasthya Abhiyan Hunger Watch Group on Verification of Starvation Deaths & Detection of Hunger in the Community*

I have many things to say in response to the presentations made earlier, but I will restrain myself and stick to my task as a speaker, and will describe a process that many of us were part of. Veena Shatrugna is present here, who was part of the Hunger Watch Group and can add to what I will say.

Before anything else, I want to say that it's not that JSA approached the issue from the point of view of starvation deaths. I want to make that clear. We see this as a political problem needing

political solutions in the current situation rather than as technical issues at all. And in fact, for many of us, the problem is so very widespread that to say we need tools to identify an emergency seems to say that there is not an emergency on, or that we do not recognise this emergency and we need to find it. Which actually goes against what many of us currently believe – that there is currently an emergency – which is very well documented and defined. And anybody who works with the people finds no difficulty in recognising, either through the people themselves or through people working with them, that there is a shortage of food, there is hunger, there is starvation, and deaths have happened as a result of starvation. We can also state very easily what needs to be done about it. So fundamentally, this is an issue of politics, not really a medical issue.

So then, why did we start to do something like this? Why did we say that we should create a tool for the diagnosis of starvation deaths? There is a context to this. This is the year 2003 – and this is stated in the report which you all have in the folder, and I would suggest you read it – when we were witnessing drought, crop failure and suicides. It is worth noting that the context of 2010 is very much like 2003. And in that context, we knew that not a single death in the country that had been defined, acknowledged as a starvation death, by the processes that exist to define causality of death. And this anyway is very poor, and we in public health know that there is absolutely no causality data. From what we do have, however, *there was not a single cause of death, direct or underlying, due to starvation*. And what is the reason for this? There is a certain death certification process, there is a medico-legal system, and there are certain diktats within government, as Harsh has also referred to, and a lack of understanding between these various systems. Then there was also the situation of defining starvation death through doing autopsy, whereby it would be stated that there was food present in the intestine and, therefore, it was not starvation death. This is there in case after case. It is hard to believe that any logical community of government officials could accept such a thing, that because they found kernels of mango in somebody's gut this is not a starvation death and they go ahead and say that this is a cultural practice or system of eating. Of course, culture also does change and deals with chronic hunger in its own way, but this is how deaths were being presented, or basically being obfuscated.

So this is the context. And I must add, since the RTF campaign has not been mentioned clearly, but this is another piece of work amongst many where there is very close interaction between RTF people and JSA to help each other out. Someone spoke to someone at the Asian Social Forum January 2003, and this is how often things come together. I think it was Jean Dreze who spoke to Abhay Shukla at Hyderabad and then in an impromptu meeting I was there, Veena was there, Narendra Gupta was there, and we decided, 'yes, we need to work out a tool for diagnosing hunger deaths, starvation deaths.'

I'm sharing with you names of the people who were part of it to give you an idea of the length and breadth of the kinds of people who were involved, because even at that time we were very conscious of the fact that though we think this is political, if we are going to approach it like this from a socio-medical perspective, then we have to give it that weight, that rigour and academic background – Dr. Veena Shatrughna (Deputy Director, National Institute of Nutrition, Hyderabad), Dr. Vandana Prasad (Paediatrician), Dr. Narendra Gupta (Prayas), Dr. Sunita Abraham (Christian Medical Association of India), Sarojini (SAMA and Convenor of MFC), Dr. C. S. Kapse (Professor, Department of Forensic Medicine, D. Y. Patil Medical College), Dr. Neeraj Hatekar (Professor, Department of Economics, University of Mumbai), Sanjay Rode (Ph. D. student, Department of Economics, University of Mumbai), Dr. Abhay Shukla (Co-ordinator, SATHI Cell, CEHAT), Dr. Neelangi Nanal (CEHAT), Dr. Amita Pitre (CEHAT) and Ms. Qudsiya (CEHAT). And all these people contributed very significantly. I would like to point out that there was a person from forensics, there were social scientists, and many of us too. We tried to develop a comprehensive tool which was *scientific*. This word was consciously adopted vis-à-vis our being political in some ways, but here we were trying to be scientific.

Coming to the tool itself. The objective of the tool was to systematically investigate and document starvation deaths. I also want to say that the reason why starvation deaths was used as a concept, was because that was what caught the eye of the public. Whereas malnutrition goes on and on; and one problem with actually documenting or collecting tools in the way that we were doing it, in a comprehensive way, would be that the entire country would qualify! All districts would qualify; so then what do you do? But then starvation deaths is something that catches the public eye, the media catches onto it, and there's a big furore even though it's short lived. So we

were also thinking tactically, how to piggyback on this media furore and attention within the administration, who then would go all out to show it was not starvation deaths. And we wanted to capitalise on this to prove that it was starvation deaths and then to show its underpinnings.

We insisted in the Hunger Watch Group that we would focus on a community diagnosis, of a starving population, and not just relief for one person or one particular family. That would eventually be part of the work and the report, as well as part of the recommendations being made. We would use the occurrence of a starvation death as an advocacy tool to highlight the omnipresent undernutrition and a chronically starved population on the brink of death, especially in the case of drought or crop failure.

It's important to point out that it's easier to do all this for adults than it is for children. Children provide a very complex challenge, medically as well as socially, and in terms of caloric intake, as it changes from month to month, week to week. It's not some standard thing that can be applied across all age groups. And even when we do nutritional studies, how do you deal with breastfeeding infants? Somebody mentioned starvation in infants 6 months onwards, but it's not that children under six months of age are not dying of starvation. They are dying of starvation due to lack of breastfeeding, or lack of exclusive breastfeeding. So how do you prove the undernutrition or starvation death of a child that was under 6 months of age? And then from 6 months to 1 year their body weight will double and treble. So caloric intakes change from month to month, it's very complex to try to define all these things.

But for adults it's much easier. So the schema was like this. And please remember that we are looking both at the community and at the individual and we are trying to make a case which supports the individual, the family, and the underlying community. So we are using the pyramid or the iceberg approach continuously. So what do we do in the community, we look at death rates. And many of these things became problematic later on and I'll discuss that, and they need to be updated, corrected, peer reviewed and all that. But one thing that we thought about, was to document death rates, because we do know that in the monsoon things happen, malaria kills a lot of people and so on. So there are also seasonal things that happen within malnutrition, and you can, by using epidemiological tools, say that the death rates within a particular village or district

at this moment in time are much higher than a representative similar district or village nearby suffering from similar conditions. Therefore, we could use death rates, and do that maybe on a tri-monthly basis. But this is a slightly problematic indicator.

Then we used anthropometric indicators to show that they are much below the state average. We used the fact that there has been no mass disaster or accidents. We used the fact of reduced food offtake, as Ritu has said from PDS, and other indicators of reduced food security like eating unusual foods, increasing indebtedness, large-scale outmigration for work, etc. We used dietary histories, and we did also calculate to the tune of 850 Kcals for adults as being the limit for starvation, which means that this is the minimum you need to just be alive without activity. If you're living on this and also performing activities, then you're eating your body up, and you're going to eventually die.

And we used verbal autopsies. So we used a combination of statistical tools, anthropometric tools, social tools as well as verbal autopsies as a very specific and telling kind of tool.

The schema for children was somewhat similar. Increase in death rates among under-five children compared to the state under-five mortality rate. Then, look at siblings of children, because that child has died but you can use as a proxy the situation of the siblings of that child; are siblings malnourished? Also try and get the data for the child that has died from the anganwadi/ICDS register. Also try and get descriptions of the child, did they have a pot-belly, their hair colour, etc. This could be done in the verbal autopsy too.

Also, looking at the issue of infection is very important, because when you say cause of death, the government invariably says the child has died from an infection, died from gastroenteritis, measles, malaria. Obviously, the end point of starvation, the point between starvation and death is always an infection, especially in children. So how do you go about this, because the child has died of infection but the child would not have died had the child not been starving or malnourished. In discussions, we came upon the idea that we should compare known mortality from diseases in well-to-do children and see this mortality alongside it – it's usually ten to twenty times higher, and obviously this cannot be the mortality from the disease process alone.

Just as an example, where the case fatality rate for measles in the community is 20% compared to the known case fatality rate of 2%, then the difference is deaths due to malnutrition. And this method is also comparable to what the WHO says.

Now what activities need to be undertaken to do this? And we are now moving into the functionalities of how to make this happen. Initial contact with the community; coming to know about villages affected; total reports of starvation deaths; selection of the village/villages or hamlets to be taken up for study; assessment of the death rates in these communities during specific recent periods; anthropometric measurements of a sample of adults and children; dietary surveys to assess adequacy of food intake in sample families, which could perhaps be done in the same families where the anthropometric survey has been done; assessment of any deterioration in food security schemes; assessing ICDS records; and verbal autopsies.

So the report would do two-three things – it would verify and certify starvation deaths, and it would clearly detail the prevailing community conditions of malnutrition and starvation, leading to morbidity and then to mortality. One thing I want to say – many of us are doctors. We do not know how cause of death is written... hardly any doctor writes cause of death in a death certificate correctly. This confusion needs to be sorted out. Many people, for instance, say heart attack but that is not a *cause* of death, cardio-respiratory arrest is a *mode* of death. So there's immediate cause of death, which in this case could be measles, but then the underlying cause of death would be starvation, or acute or chronic malnutrition. So it is also this lack of using the 'underlying cause of death' space within death certification that has caused a situation where not a single death has been registered as caused by malnutrition. We have quite a detailed description of how we would have three doctors after the verbal autopsy trying to say that the cause was highly probable due to starvation, or most probable... we have tried to record such details also in the report.

So the structure of the report would be an introduction, the under-five mortality rate, the death rate, the estimation of malnourished children... this was weight-for-age and I'll come to this later, as it may not necessarily correspond now. Another thing I want to point out, we used the IAP (Indian Academy of Paediatrics) classification because the ICDS was using this. When

ICDS shifts to WHO standards and uses a Z-score, obviously we should be using that because then we can correlate the ICDS data, however faulty it is, even if only to triangulate. I would recommend that we should update this IAP and weight-for-age depending on what is currently being used within the system. And we also need to add perhaps Mid-Upper Arm Circumference (MUAC) to this, because SAM is an entity that is coming and there is no other way of defining it except to do that. It is not difficult to teach people to use mid-upper arm circumference and so we should use that also as one indicator. We can add that in this protocol.

Details of starvation deaths among adults, community situation of food security, and draw the hunger pyramid, and then have recommendations as to what to do. So this is the hunger pyramid – at the top are starvation deaths and description of the deaths that have occurred, underlying that is the starving population which is adults having 850 Kcals or below. And before the concept of SAM came, the way we dealt with children in the original report was to say that a child in any family where an adult had minus 850. Note that starvation deaths are numbers, severely malnourished are numbers, malnourished are numbers, whereas starving population is families. Or if you want you can do it as starving adults and use SAM as a current way of estimating starving children through the MUAC being less than 110 millimeters. That's another option. And below that comes all malnourished. And the point that Ritu made about mild is extremely important and critical, so mild is included in that malnourished.

So that's where the Hunger Watch protocol finished. And we did go ahead to do a training soon after with about 50 activists from different parts of the country. And while JSA developed the tool, the RTF campaign organised the training meeting in Bhopal in August 2003. Then the Hunger Watch Group itself did not meet again, but many of the groups that came to the training adapted this tool; not completely, but many used it in some way. The way this was generally used was to use anthropometry, the offtakes from food-related schemes, and dietary intakes. And for me it was very significant that the demystification of anthropometry happened in this manner. In the community NGO and field workers had never done this, analysed heights, weights and all. This was always seen as a technical exercise. And now, seven years later, I feel this is being used very much among social action groups to document things.

Just a quick comment on why the group did not go ahead, and this will help us along when we develop our own tools. The initiating group was not able to carry on... we formed the Hunger Watch Group and the tool, but we didn't do any watching. It required too much time, money and effort to follow up with surveys. We felt that through trainings at least we could do something. Though many members in the RTF campaign did it on their own, there was no coordinated activity, it was left to individuals to pick it up. Also, perhaps, it was too technical. It definitely needed the intervention of doctors at some point. Verbal autopsy is a medical verbal autopsy and not a social verbal autopsy. So we did require doctors to help field workers validate it so that it could send a message to the system of cause of death certification among the medical profession.

So I feel the Commissioner's Office taking this on and putting it into the Supreme Court petition is hugely valuable. And recently, thanks to Ritu's invitation to us to present this work, we have had a conversation about this in JSA, and we feel we should get together again and update.

## **Discussion**

*Veena Shatrugna*

Vandana has done such a wonderful job that I do not feel I need to add anything more. Except to say that when we were trying to focus on the amount of calories, below which it would qualify as starvation, we looked at some reports of the International Labour Organization (ILO) but there wasn't much data. And we came across 500 calories... one of NNMB reports which had surveyed some drought-affected areas. And then I was fighting for taking BMR (Basal Metabolic Rate), what someone earlier described as the essential necessary for keeping body and soul together, and the BMR of even a 35 kg woman is around 1000 calories. And 1000 calories is like, more than 250 gms of rice. So, do you mean to say that people eat 250 gms of rice? So, I had to contend with that. Well, we didn't debate it very long then, but now I am convinced that we must keep the *BMR level as the absolute essential for the body to stay alive*. And you can't even lose any more weight. Because our population has already lost whatever weight it had. After that death comes rapidly, say within a week. This is unlike the Second World War famine,

the Dutch famine, where they lived for 2 months – because they had so much body fat. But our adults do not live beyond one week-10 days, because of infection and other things.

So I would really like that this group takes this up for discussion. And I've brought the literature – 1000 calories for a 35 kg woman is the basic, for men it would be around 40 kg; and these are really undernourished people.

The second point I'd like to raise, and in connection with Vandana's point – and as she said, unfortunately the group didn't meet and it was a painful few months just to read those verbal autopsies – is the issue of hunger and infection. Now, a person in a family, with tuberculosis, dying of hunger... the rest of the family is going on with 30-35 kgs, why does this happen? Infection itself kills your appetite. And the food the poor have... and in the Maharashtra area where we were working, people eat bhakri... and we were able to standardise and calculate the calories there... people with tuberculosis cannot eat that food. So we must recognise that just because the government throws calories, it is not going to revive someone with tuberculosis or any chronic infection, malaria, etc. Now, there was a time in the 1950s when the treatment for tuberculosis was food, it was things like beef, and more food. And of course, sanatorium treatment. Today, we do not even talk about food. We assume that the calories in the family will be eaten by the child, but we know that the first thing that infection does is it knocks off your appetite. And the first thing that doctors ask is, 'how is your appetite?' We know this, but it does not register in our minds! So we must look at it differently; there must be appropriate food for illness. For instance, when I fall sick I get bread, *khichdi*, milk and I will not eat the hard roti that is usual at other times. So that's how we have to read these deaths – that there might be grain, but people who are very sick cannot eat this food. So I feel we have to keep this in mind when we discuss. There are the 2 points I wanted to make.

NCS – Thank you very much Veena ji and now we break for tea.

## Post-tea continuation of Discussion

*D.M. Diwakar*

Thank you for these presentations. All these 3 levels are complementary to each other. My question is related to the political environment of hunger and poverty. And alongside this, access to resources and livelihood, and their distributional dimensions among particular communities and groups, needs to be understood. Why I am saying this is because after 60 years of independence still we are talking of acute hunger and malnutrition, instead of having ensured a decent life, which we promised through the freedom struggle. One has to be very holistic, but cultural sensitiveness towards this problem must be underlined when we are discussing this issue.

Secondly, when we are discussing the question of governance, the failures, etc., the accountability question must be there somewhere. We have to look into the designs of the district level and other dimensions. We are talking of PDS that is still not in place, and other institutions. We wonder about the systematic failure of that governance, and still we hope for the same delivery systems to do better. Can we think of some alternative mechanism, through PRI or gram-sabha or something like that? This may appear holistic at this stage, but can we think of some alternative way of identifying this at the grassroots level? Because the data aspect is very important and everyone is agreed on the fact that data on these dimensions has not been there or is inadequate.

And third point, when we are talking of hunger at the family level, agrarian societies are still in the parochial mindset, and the gender question, especially with respect to the last person in the family to eat food, has serious implications in terms of hunger and poverty. So malnutrition in gender perspective is to be understood separately.

To depend on the gram-sabha level to identify the deficit households is not a big question at this stage, if we capacitate them for these exercises. According to me we need to depend on the local deprived target groups, make them assertive and empowered in that direction and we can depend on them to get their feedback. That will help us in terms of database for identification of the

poor, instead of debating in the critical framework of debate. Because Harsh Mander ji has said very categorically about those living in starvation and hunger, that they are living in a very chronic situation; if they do not have grain in the house they are depending on some roots and other things. But the point I want to make here is the narrowing down of the public space, and access to livelihood and resources is the real question. We should address these issues at the institutional level; think about what kind of institutional arrangements should be there.

*Anant Krishnan*

My remarks are general. I work in the area of non-communicable diseases with WHO, especially with obesity. I work in Haryana, from where starvation deaths are not commonly reported. So I preface my comments by saying that I have no personal experience of working with hunger, or hungry people, or in areas where hunger is a major reality.

I will restrict my discussion to an academic issue. One issue I'm not clear about – I thought we are looking for criteria for pre-emptive identification of areas where some intervention could be done to *prevent* starvation. But largely the discussion so far has been more of the kind that investigates *after* the starvation death has occurred. Clarity is needed on this, because the criteria and the approach would change in each scenario. We need to identify in advance, or else it will be too late.

The criteria for identification cannot be done without identifying *how* we are going to do it; we cannot just identify criteria in isolation. Then, is this going to be done in a programme mode or a research mode? Most of the experiences we have been discussing have been done in a sort of research mode, and I do not think these modes will be preventive, they seem to be post-facto research mode. If we are looking at a programmatic preventive mode, then our criteria has to be different. I find this discussion is more medical-oriented, even though I myself am from a medical background. I think we need to look at more social and more macro level issues; issues of calories and all I think are not that important, because I do not think in a programme mode we are going to try and measure calories and all... that won't work in a programme mode. This is, agreeing that we are going to work in a programme mode.

One of the most important nutritional programmes in the country is ICDS. Should this be an entry point for whatever strategies we build? Because we need to be clear about what the programme approach is going to be. It could very well be a good entry point or then a bad one.

Just 2 more comments. I think the framework provided by Ritu Priya is a good one – looking at 3 levels, micro, meso and macro. I feel this should be a point of further discussion. We should start identifying indicators at each of these levels. For instance, at the micro level, look at death rate of Protein-Energy Malnutrition (PEM) level/ malnutrition level maybe by using simple criteria of MUAC like Vandana said. Then looking at a community, meso, level, assessment of community resources to deal with such a situation, could be the Public Distribution System (PDS), National Rural Employment Guarantee Act (NREGA) coverage. And thirdly could be macro or environmental issues, whether it is drought affected, disaster area, etc. So, with a combination of these three levels – we can discuss how to combine them – it should give us a composite indicator to identify an area or individual. But as an academic, whichever criteria we take, there will be some cut-off, some trade-offs here and there. How do you address those trade-offs? How do you validate whatever criteria we decide, whether it is a good or a bad one? That needs to be discussed. Thank you.

*Darshini Mahadevia*

Taking off from the previous speaker, the methodologies presented were very elaborate. Speaking as an external observer, we need to have much simpler ones, especially when there are acute situations. Second point, while we are discussing methodologies we also need to discuss institutional mechanisms. Is it ICDS, or Primary Health Centres (PHCs), where these things could be anchored, expanded? The starvation code – who's going to do it? The district admin machinery, or the health officials, or PHCs... wherever it works... we all know of mal-governance, lack of political will, etc. But somewhere some systems are working, could that be civil society organisations, for operationalising? From the operationalising point of view, think of indicators and methodologies; that's one way to at least begin the work and get it off the ground. Otherwise, it may end up like the huge poverty discussions in India, on measuring it, yet

we have never come to any conclusion, and today there are so many estimates that it has created more confusion than any programme interventions.

*Veena Shatrugna*

I support that mode of investigation that looks at the out-there, identifiable criteria linked to the socio-economic conditions of communities. Just to share a bit of information, in 2003-2004 drought surveys were done by the NNMB in Madhya Pradesh, Gujarat and Orissa, those were the drought areas. It was very disturbing. But the weights were slightly better than the weights in the non-drought areas. And this threw up many questions. Now, unless you investigate *activity...* because what happens during drought? There's no work, people sit at home, and whatever stores are there they are living off it. First thing to do is you reduce activity, when you do not eat food. I do not have to tell you this, you all have seen so many people fasting at Jantar Mantar and other dharnas, and by the second day people are lying down, they can't do anything more than that. So, reducing activity is what the body tries to do. And they have already reached a weight of 30-35 kgs. So anthropometry can be very misleading for adults. So trying to put in place a whole machinery would be problematic. In fact, NNMB reports are available for you to see if you are interested, the diet survey data is on the website I think.

The second thing is, in the case of children, as Vandana said, they very rapidly slip from minus one standard deviation (SD) to minus two SD, depending on infection, on feeding patterns. So I would say putting in place a whole machinery for anthropometry must be weighed very carefully.

*Vandana Prasad*

I completely agree with Veena, and just to add one thing. When we did a survey of homeless people in Delhi, among a group of adult males, their anthropometry seems more normal than what was found by the NFHS 3. But the costs of maintaining that anthropometric normalcy are really huge. So unless we place anthropometry in a perspective, we are not going to gain too much out of it.

One or two technical points that I wanted to make. Even anaemia as a form of protein malnutrition is something I've learned from Veena. Iron cannot convert to haemoglobin in the absence of good quality protein diets, and you see that time and time again. So this very big focus on micronutrient deficiencies and hidden hunger on the grounds of very widespread anaemia needs to be deconstructed. It's linked very much to protein calorie deficiency.

I also absolutely do not agree that SAM is the most cost-effective strategy. In terms of costs of saving children with SAM, the costs are extremely high, institutional as well as food-related costs. And the costs of what happens to a child as she/he arrives into SAM are huge. So I feel we should look at that – of course even health economists could look at that – but I challenge that view.

Then about the view that in a situation of mal-distribution, communities can still play a role. Now, Delhi is the best example of mal-distribution of food, but I do not see communities in Delhi automatically playing a role to redress that. So I would suggest that the state has a huge role in every given situation, whether there is mal-distribution or there is an entire community homogenous in its lack of food.

In terms of programmes and institutional mechanisms, that's a very valid point, because eventually one has to look at how these things will translate. And I would just recommend – we had done about two years work, as part of another group and Veena was part of that also, Working Group for Children Under Six, that's looked at the kinds of institutions and programmatic interventions that would be required, including creches, maternity entitlements, things that have not come up in this discussion on food. That paper was published in the EPW and I request the organisers to share that with you.

*Prema Ramachandran*

One of our existing machineries for monitoring undernutrition in pre-school children is ICDS. We know it has problems, but their infrastructure is one of the widest. And slowly there are attempts to improve the availability of balances which are one critical component. At the

moment, because of the multiplicity of standards, nobody really looked at that data. Essentially, the MPRs (Monthly Progress Reports) were just sent up and down rather than critically looked at as district level data, as valuable information which can be understood and tapped. Now that need not any longer remain as a major constraint.

Today you have an enabling environment, wherein there is a signed card by the Department of Women and Child Development and Department of Health. For the first time, the one dream that we all had, that each child in this country will have its card, held at home, as a measure indicating over time what happened to the child. The card at least has been accepted. I know there is a long way down before the card actually becomes operationalised but there is a machinery today, and therefore easy to strengthen. And there is persuasive evidence in Orissa and Maharashtra, where people monitored/supervised and they did find an increase – whatever criteria was used – it did show an increase in proportion of undernutrition in pre-school children, which perhaps somewhat preceded the problems in the adults because we all recognise that children are more vulnerable. So I would really urge that we argue for strengthening the ICDS system, because that system is already available. And perhaps if we pay more attention to monitoring what is happening, it could give you a warning signal, along with all other things such as PDS off-take and mid-day meal off-take. For instance, one of the things that the NNMB survey showed... was that immediately off-take from mid-day meal and from ICDS both improved in the drought-prone areas. So community is there, giving you signals; we need to use each of these to amplify the other, rectify the noises that exist so that you can bring it to action.

Another under-used system is school children. They all come to one place under Sarva Shiksha Abhiyan. Heights and weights can be taken, it's not an impossibility. At least to report underweight; preferably wasting also, but I know I am asking for the moon here, but even weight will give you a hint. So do not say anthropometry is too difficult; it can be used effectively in the community as a warning signal long before acute starvation arrives. So we should try using this in the current moment. Thank you.

*N.C. Saxena*

Thank you.

*Padma T.V.*

I was just wondering if our idea is to stop this post-facto analysis and have some sort of a preventive or pre-emptive intervention. Whether some sort of a mapping exercise will help as we already have so much data that is there, and quickly identify which are the more vulnerable districts with a larger proportion of vulnerable population. So you have this baseline. And then you do the macro factors coming in, say a drought or something, so you quickly have some way of having an early intervention there to prevent that large 40% going from one category into the next higher category. If we could devise some such sort of a quick survey.

*N.C. Saxena*

Thank you. In fact, the DLHS (District Level Household and facility Survey) data shows that about 50% of the malnourished children are living in 20% of the districts. So these 20% districts should be the area where we focus.

### **The Technical versus Political Approach**

*Shilpa Deshpande*

I have a slightly more fundamental kind of a question. The assumption behind our conversation here today is that if we had a better and more urgent way of identifying those who are likely to fall into a situation of acute hunger, then effective administrative action can take place. So I just want to clarify – is it the understanding here that administrative action is not taking place because of a lack of information? Or a lack of ability? Or are there instances where making this information available, in whatever form, has facilitated administrative action? So if there are such cases, it would help to think of future action, however micro they may be. It might be useful if we also discuss why does administrative action not take place. There were a few comments on this in the morning and I feel that those should also be spoken about.

*Vijay Pratap*

I also agree that this workshop is to evolve practical tools. We have seen how when the scientific community is alienated from the society then they drop nuclear bombs on people as experiments, as happened in Japan. Similarly, if you create this tool, then this self-styled 'pro-poor' government will draw legitimacy from this, while at the same time the corporate compatibility of this government will also grow unhindered. To make the entire system corporate compatible and also to maintain this starvation of genocidal proportions will be possible simultaneously.

Unless, and I agree with Vandana here, we ensure that along with the technical discussion we also treat this as an issue of political economy. And yes, there could be limitations at the level of funding, or time, or organisations, but conceptually we must ensure that there is no cognitive rupture with questions of governance, of political economy, of the social transformation agenda. As regards how to go about this, only the professional social scientists here can tell. But as a political democracy practitioner, I feel disturbed by the fact that experts usually tend to divorce issues from politics. And even single-issue based organisations, howsoever sensitive they may be, often end up legitimising this government which is clearly anti-poor but gives itself a pro-poor image. We may not be able to discuss this in this workshop but I feel that there should be another workshop organised to discuss this duality, in which we all should participate.

*Vikas Bajpai*

We cannot presume that the government all this while has been unaware of the technicalities of the issue, when it continues to instruct its own administrators-to-be about how to deal with allegations of starvation-deaths, that the first thing to do should be to throw a bag of rice/grain into the victim's house! So while recognising the importance of these technical issues and technical aspects, I think if we are at all serious about this issue then one primary thing to take care of is to keep politics in command. And we all need to take political stands on various issues. And if, for whatever reason, we shy away from doing that, then I think our whole deliberations will boil down to being sophisticated sophistry at its best.

*Harsh Mander*

Two-three confusions of my own that I would like to add to this discussion. But to start with, I liked very much the macro, meso and micro identification; I think it's a very useful framework that Ritu's given. For me, however, the meso is a very important level. Taking the example of the Food Security Act... suppose we have this Act, ultimately I feel it will have to be implemented through the local government. There will be something that the central government will have to ensure – perhaps universal PDS, provide resources, food procurement, food production, etc. Then there's a micro level where the responsibility to prevent hunger, chronic and acute malnutrition and to address it effectively, and in a timely way, ultimately will have to be a local phenomenon, it will be the local government's responsibility. For that reason, the micro will become very important, where you map all this. And it will have a lot of implications. For instance, for a child who comes from a family which has no food, the ICDS food, which is the supplementary nutrition, is going to end up being her primary nutrition. We do not recognise that, we invisibilise that completely. And we wait for the child to slip down, and her body and brain does not work and then you identify and at best, address. Whereas it is quite possible if you do a proper mapping of households and communities in the local area that you will be able to anticipate and so on.

But I think the meso level is very important. Dr. Saxena was chairing a committee to identify BPL; and I think in effect we were trying to do some meso level analysis. We had proposed that there should be automatic inclusion of certain social categories; if the government has to identify and target, certain social categories by an implied mapping of this kind must be included. So it does involve including geographical communities like primitive tribal groups, or communities like the Musahars which have to be automatically included. I think behind that was an implied meso level analysis of identifying them to be people who are, in very large numbers, vulnerable to hunger.

But I also think we have to recognise a meso level analysis of class and social categories, and I was discussing this with Ritu. Are landless workers, migrant workers, single women-headed households, street children more vulnerable to hunger? That throws up a different set of challenges, once you pose this as a requirement; because this will have implications for public

policy beyond the local mapping. I feel our discussion today on addressing and preventing hunger should be slightly widened on this account.

Second point was that there are friends who said that they do not want to come to this consultation because anything we do about identifying hunger implies identifying one set of people against another, which implies a normative or political support to anything less than a universal PDS. I found that an important, but curious, objection. Because when we talk about universal, are we not talking about recognising difference? Marxist, feminist, Dalit politics, all of this has taught us that we are not identical. So whereas you recognise universal entitlement, you do have to recognise that some people face much more profound barriers than somebody else. So is any requirement of identification by implication leading you to the dreaded 'T' word *targeting*? What about affirmative action? Affirmative action means that you recognise that some people are more vulnerable and need social focus. I am very confused about this. How has the universalisation debate forgotten the principle of recognising difference and of affirmative action?

*Veena Shatrugna*

I want to respond to the point that the government knows that the people are starving, and in effect, one would say that it is not for lack of any tool. I would partially agree with you, not completely. And this is based on the experience we had. A very well-meaning forensic doctor, Dr. C.S. Kapse, when we called him to our Hunger Watch meeting, he said, 'we were actively discouraged from even investigating what hunger death was, during an autopsy'. He said, 'I have never read, we have no pictures, we have nothing in the text'. And he was a really humble person, who sat through the whole debate with us. And then it occurred to us that after independence this nation wanted to forget famine of the 1940s. Now I'm not saying it's a conspiracy. But there definitely was a whole way of development that was being put into place where we had to erase memories. And Kapse was one person. Notwithstanding the fact that people are starving.

But let me just tell you one small detail – nutrition is not a subject in any discipline. For the forensic doctor, he's never seen a picture. For medicine, nutrition is an embarrassment – when the patient asks you 'should I take this medicine before food or after food?' the doctor will just quickly write a prescription and dismiss it.... the doctor really does not know any nutrition. The social scientists have got into exotic areas of intra-household distribution of food, they love this gender question and they go to town with it. PhD scientists, well, I do not have to tell you. Statisticians love to give you data on 17.3 or 17.8 or whatever. Really, hunger is not there in any discipline. We have one institute and it's carrying a very huge burden, I think it's breaking under that burden. Unless it becomes everybody's issue...

And I certainly feel that we need to know technical information, because the government knows how to tell you, 'yes, but there was grain in the stomach', 'no, it was undernutrition not starvation', 'no, it was tuberculosis it was not starvation'. The government uses its technical card. But I think it is a whole phenomenon of what has happened to this country, and the sooner we reckon with it the better. And today of course... Barker's hypothesis! In this context, how can you talk of undernutrition? More people are working on those subjects than they are on hunger. Hunger's not fashionable and it's not there in any discipline.

### *Imrana Qadeer*

There is a need for clarifying the definitional issues. I would begin with what Harsh said in the morning. There were these terms used – acute hunger, acute starvation, acute malnutrition and so on. I think we should keep in mind that nutrition is a physiological term, and we should not confuse it with clinical manifestations of physiology where you are talking of stunting, or weight loss, or any other symptomatic form of nutrient deficiency. And the important thing to recognise is that hunger is a very subjective element, and unless we keep this clarity in mind, we will keep confusing these issues. And as has been pointed out, women, especially in poor families, are taught right from the beginning to acclimatise their systems to hunger, eat just rotis and chillies to kill their hunger, and therefore they are never hungry. And it has already been stated that this becomes hidden hunger. And yet, hunger is an important indicator, even if it is subjective.

The second definitional issue which has to be corrected, which I'm glad Veena raised the issue – this whole thing of us accepting the definition of starvation death, that it has to be the BMR. BMR is a tool that is used to measure something – your minimum calorie requirement. You put a person flat for a certain number of hours, six or eight, or whatever, and you measure that. But when you are talking of starvation of a person, she has to turn around, or sit, she has to have a glass of water if not eat, she has to walk a little. And I fail to understand therefore, what is the logic of us accepting any value less than 1200 calories? You look at the ICMR data, and a 40 kg woman needs that much of calories. So we are ourselves falling prey to using definitions which are very convincing. Now, on the one hand, you have an administration which is not inclined to, and on the other, we are ourselves reducing the validity of our own data. So I would request that at the definitional level I would even say 1200 – and not 1000 – calories. And it is not calories; you convert local foods into calories and you can very easily assess how much food a family is getting.

And the last thing that I want to say is that every time we have a seminar, always the position gets taken that “where is political economy?” And then you get into political economy. Of course, we ought to be talking about production, about structural adjustment, about politics of agriculture and so on; it is very important. But how many of us go out of this seminar and involve ourselves in that kind of politics? I think the purpose of this seminar was that given the limitation of our own professional work, how can we take this very critical issue in our own domain and show how an epidemiological approach, which Ritu calls a meso approach, can be used to highlight an issue which is being so neglected in public debate as well as public policy. So if we have to all the time prove our political credentials then we will never be talking of these things. And I completely agree that there is a general crisis, but this general crisis affects some much more than others and we have to pay attention to that.

*N.C. Saxena*

Ritu, is there going to be another presentation now?

*Ritu Priya*

If Dipa or someone would like to come in with the experiences from within the Commissioners' Office in terms of actually using this tool, and in the light of what has been already presented?

*Dipa Sinha*

We get complaints of starvation deaths and one of the things we do is either someone from the office or the advisors and their teams goes and investigates what has happened, and see what recommendations we can give to the government for what is to be done immediately as well as over a longer term. And as Harsh said in his presentation, we have not really gone into proving whether the death was a starvation death or not, but looking at the immediate family and the community. So what we are talking about here, the micro and the meso, is what we have tried to look at. And we do an analysis of their situation, especially with respect to access to livelihood and connect that to hunger, and see what can be done. And we have not been able to use the JSA verbal autopsy format although we had it, because as Vandana said, this does require a certain level of expertise and usually these are immediate teams put together, people who are working in the area are asked to go and see what's happening. But what does clearly come out is that it is a community where many families are in destitution and there has been a sudden shock. For instance, last year, we saw an increase in the number of starvation death complaints we were getting.

So, to give some examples from Bihar's Gaya district, or Orissa, where we went, and this would be obvious and known to most of you here. One, it was usually children, old people, widows. Large numbers of people would have migrated out recently and the deaths were among those who were left behind in the village with some grain or money, which would run out very soon. And those who had migrated were also not earning so much money as to keep sending money back home. The Gaya case was quite desperate, where the community, three days before this woman died, had made a list of people who they said would die of starvation, and gave a petition to the District Collector stating the situation. They had no PDS for the last one year, there was no NREGA work site in that village since NREGA started, it was a Musahar tola where the ICDS anganwadi centre was located across a stream so it was close by in terms of distance, but the

young children could not go there at all. People were clearly suffering, there was no work, those who were able to work had gone out, and the rest had done this petition to the DC. Three days later this woman dies and the entire focus of the administration was to prove how this was not a starvation death. And in that context for us to go and investigate starvation was really not respecting the dignity of the community, to ask details about what she had eaten last and when she had eaten... it was just not done. But it was clear that there was this kind of destitution.

And everywhere where we have seen these reports coming in it's a clear case of severe failure of every social security food scheme that is in place, on which there are Supreme Court orders, and not just for that family but usually for that entire community. Especially ICDS, PDS and NREGA. And there were cases where the family had worked under the NREGA but hadn't got their wages. So where they had done the work, the wages did not come in on time, and one would see that a child in that family dies or sometimes a widow or an old person.

So this is nothing new to add but just to give a picture of how this whole experience of investigating starvation deaths can be quite distressing. To just go into this investigation mode is itself distressing, and then you go and see that everything fails. I would like Sameet here (from the Office of the Commissioners to the Supreme Court) to add to this. What really broke us at the Office is that we did these case studies of people living with hunger and went back to take photographs and found that the family had just disappeared – there were six deaths in one family. And this is a family which we have documented and written about to the government, etc. So somewhere these issues of governance and basic things not working need to be addressed, before we say about what extra interventions need to be done for people living in these conditions. But before I end, I would like to say that all this does not mean that we should not get into these discussions about what these definitions are and how we understand these things. Because we have seen that in trying to fight the system you have to get into these technical debates, we cannot shy away from them.

*Vyas Mishra*

The fact is that the state is not functioning in favour of the poor. When Ritu was making her presentation, and as regards the modes of identifying hunger and starvation, I would like to say that in Bihar we are in the process of preparing a rule which would provide a kind of budget to every district to ensure that nobody dies of hunger. Regarding the point she mentioned about use of the panchayats, the mukhiya and the community to find out which household is not having food... everybody in the village knows which the vulnerable people are. In other states, for instance, I have heard about Uttarakhand, that if people do not see smoke coming out of a particular household's kitchen they can safely assume that the family has nothing to cook. So the villagers know who is starving and who has food or not. I'm from Uttar Pradesh but I work in Bihar, but I know that in certain parts of UP and also from where I hail, people will not have food to eat but because of dignity, they will not disclose this. Dignity is a very important factor there. And I echo the view that it is very painful to go and find out that the people had nothing to eat.

So how to involve the community, because panchayats are there, and there is democratic decentralisation at this basic unit of local level governance. And even that is full of people who do not have any concern for the poor. So the issue is how to ensure that the community is involved and food reaches the needy. Because it is a fact that often the PDS shops are closed, we have seen this in our work. The Bihar government and the central government have different estimates of the number of poor in Bihar and there is a shortage in the foodgrains reaching the PDS shops from the centre. The welfare measures, which are intended to benefit the poor, are not reaching them; the system is not geared to help them. We need to identify the methods how the community can be involved in identifying the needy people, and how the administrative machinery can be made accountable for reaching the food to the needy.

I'm sharing the scenario in my state and even this is not my area of work, but because of drought in 26 districts, I took it upon myself and my department of Disaster Management, that I would certainly frame some rules. And the Chief Minister has agreed and we are going to work on the Mukhya Mantri Anna Kalash Yojana. I would like to learn from you – how in actual terms and at the grassroots level should we identify the poor, and how to ensure the food reaches the hungry

households? And how long can we provide this food? Can it be sustained? There is an Annapoorna scheme. The PDS is not functioning, as it is not getting foodgrains because the state government is not getting them from the central government. We should identify the potential victims of hunger and approach them through the community, while at the same time safeguarding their dignity.

We should also ensure that the panchayats are involved and are made accountable, see what action can be taken against functionaries like the panchayat headman if the food does not reach the needy. Can he, perhaps, be removed under the Panchayat Act? Government functionaries like panchayat secretary or the anganwadi sevika are in touch with the households at the grassroots level, and for accountability, we must think what action can be taken against them if they fail in their duties. We in Bihar really want to do something, so I request you all to give me suggestions on the best practices, so that the rules I'm making can be applicable at the ground level.

I am thinking of creating a special corpus fund at the district level so that collectors can have the flexibility to draw money from that. We are also experimenting with putting 1 quintal of foodgrain at every panchayat level with the designated PDS and that should be known to everybody, so that the needy can be given food from this. So if we deliberate on the doable things, then I can say that in my state we are in a position to contain this problem. The government is very sensitive, but the fact remains that the delivery is very poor. So given these imperfections, what can be the best possible doable thing? If one model could be developed in one state, then maybe that could be replicated in other states.

*Vikas Bajpai*

I would like to respond to Dr. Qadeer. When I said keeping politics in command and she raised the point as to how many of us will go out and involve ourselves in these activities, there is truly no complaint regarding that. Certainly, that is a fact, and we need to recognise that we need to be corrected on that. Second, if we have a political orientation that guides our academics as well. From the same set of data I can produce a very sterile interpretation as well as one that will propel people into action. An example is the poverty debate now, where everyone is giving

different interpretations and it is linked with one political motive or the other. I feel that to say that there is no politics to it and that it can be secondary and that all that we need to do is just be involved in our academics is... I feel that the academics that we do will be according to our political convictions.

*Prema Ramachandran*

I want take this back to the technical discussion, about identifying the vulnerable segment. In the next one year, in 284 high-focus districts you will have information on stunting and underweight as well as low BMI (Body Mass Index), across age groups for the first time. Because DLHS only covers pre-school children; what is happening to adults? And we were talking about the marginalised groups, the elderly, destitute, disabled; this data would become available and perhaps could be used as a sensitising tool to the districts. All districts are not the same, there are inter-district as well as intra-district differences in vulnerability and this varies from place to place. So, if wisely used, perhaps the service delivery people could be sensitised well ahead. Then this could also be used as a tool to ask for more money, create more foodgrain banks, etc. This is an opportunity which is now going to open up and I'm bringing it to your notice so that you could optimally use it and do something of a preventive nature and not have to act post-facto.

*N.C. Saxena*

Would Vandana and Ritu like to react to some of the issues that have been raised?

*Vandana Prasad*

In response to Vikas ji, I agree that if the revolution had come or is coming then we would not need to perhaps speak in these terms, but at the same time I do not think anybody is pretending this is apolitical. I do not think Imrana ji would have been suggesting that and most of us know that this is a political task.

What we can see through decades of work is that we have been dealt a hand, and this is the given situation with all its constraints. Then there are spaces that are available to us to engage. Or we

can stand aside and say that till the conditions are ideal, or we are able to fight dramatically, we do not do anything. I do not think we have the privilege of inaction either. So what does one do, as middle class people who have some technical expertise? And our experience in the last five years of doing... and I do not call it technical work... I'm saying doing rigorous work using our expertise is that you are able to demystify things, for yourself and fellow comrades and people who are working at ground level. Like I said, we were able to demystify the use of anthropometry. You're able to create a larger pressure group, right from people who are willing to fight on political grounds, and even within the middle class, and within the system also. And you are able to support ground level struggles in the spaces which are currently available, which are largely technical... and this has to be recognised. And it's a fact that we are not getting most of the other spaces easily. I would be happy to participate in a direct all-out fight because I feel we can win all these issues on those grounds alone. But that space not being available, should we really relinquish all spaces and therefore not engage in this current hand that we have been dealt? It's an open question I feel.

*Ritu Priya*

The question has been answered enough at one level. I'll only say that within the socio-political context and also keeping the technical context of public health in mind we have to, within that context, recognise how do we do prevention. Because, it's true, we are not waiting for revolution to happen and then taking preventive action. What we can do is, use our understanding to therefore predict what is possible to become, and therefore take preventive action. And that's how this whole issue has arisen.

That's one. And second, even if the best politics happened today and we got the best answers and the best thing in place, would that mean, therefore, that we immediately have everything worked out right? We would not. Even if politics is primary, people can die. So, therefore, what is going to be put in at this point in time, who is going to take the final call? When you suggest something, the final call will go to Montek Singh ji and Manmohan Singh ji, and what are we expecting from them? Either we remove them and put somebody else and have a better decision-making process. If not, within the given socio-political context, do we want the system to work

in a pro-people manner, in a pro-poor manner or not at all? Do we need to sensitise our workers – we have now 70,000 ASHAs (Accredited Social Health Activists), we have got at least 6,000 Village Health and Sanitation Committees (VHSCs) in place because of the National Rural Health Mission (NRHM) – do we want them to go the way the rest of the government functionaries have gone, or is it possible today to expand the discourse that sensitises them to a different way of governance and systems of functioning? These are opportunities and openings which are possible, and there is a need to sensitise.

And lastly, nobody thinks that the technical can substitute the political.

*N.C. Saxena*

We have discussed this technical and political issue for a while now, and it is not an either-or situation. There needs to be focus on issues of governance, economy, systemic reform as much as on the technical issues of hunger and malnutrition. To give a simple example, the very methodology with which we measure children's weight, etc., and declare them as being Grade III or Grade IV or undernourished, there are so many methodologies. There is the IAP classification, NCHS (National Centre for Health Statistics), there is Gomez classification, and all this creates lots of confusion. Unless we understand this issue and see that only one classification is followed by the Government of India in all the methodologies, by NFHS and state governments, there will be confusion. Look at the issue of what age group to tackle. We have schemes for feeding school children, schemes for feeding pre-school children, but research might show you that it is the infants from 6 months to two years who are going to be left out and they are the most important. So we cannot dilute the importance of technical issues. But at the same time we need solutions as to what to do.

So let's not go over the same issue again and again, but let's hear those who have not spoken so far.

*Shilpa Deshpande*

I agree with what a lot of people have said so far and my point is not to create a binary between the technical and the political, or saying that these are technical matters which should be left to just a few. All people who are looking to address the issue of undernutrition and hunger need to be very familiar with the technical aspects of it to be able to add any value. But I'm trying to say that if we want to have effective administrative action, what are the range of things that we may need to think of? So tools are one aspect of it, but what about other policies, suggestions, or things like capacity building or training? Basically, looking at a range of things to be able to ensure effective administrative action. So this is just to say that, can we focus on that as the outcome, and broaden the scope of this discussion?

*D.M. Diwakar*

When we are talking about technical aspects, then we have to also take time-frame into account. In the short-term, the kind of definitions we are taking for malnutrition, hunger and acute poverty, we have to think whether these can be continued for the long term as well. If not, then the kind of judgement we are putting for the short-term basis, in terms of policies, subsidies, supply, institutions, etc., will be different from the long-term basis. For the long term, we need different kinds of production and distribution mechanisms through which we can address those issues, so that the subsidy, dole and this delivery will not continue in that sense.

*Harsh Mander*

I want to talk again about how the government has responded to this question. I have to die to prove that I am starving, and even then it's hard to prove. That is one thing I wanted to say.

And the other is that – and this is not a story even though it may sound like one – Mr. Shankar was telling me that when he was Secretary – Rural Development, there was one very rare question around hunger which was raised, and so which department would answer that question became a big issue. It first went to Food and Civil Supplies, and they said, 'no, we distribute food, we do not deal with hunger', then they went to Agriculture, and they said 'no, we grow food, we do not deal with hunger', and so it went round and round. And finally, Mr. Shankar said

that even though it can be rural or urban, etc., but since no one else wants to handle it, so I'll take it under Rural Development. Likewise, in the petition in the Supreme Court, one of the issues we would taken was around the issue of homelessness, and exactly the same story happened. State governments were asked to respond and state secretaries were wondering where to send this... there's no department which deals with homelessness. A government like Maharashtra, with Mumbai, was asking us which department was supposed to address the issues of homelessness. And we said, 'it's not us but you who should decide this'. And they said, 'but Housing does not do it', and so on.

So, I think we are dealing with a set of problems and set of communities, individuals, classes and social categories of people, whose life and suffering and whose struggles for surviving with dignity are so invisible in the public discourse and as far as the government is concerned. My feeling is that taking up their concern and pushing them, with technical, social, political, and economic elements to it, is also a political act.

*N.C. Saxena*

I thank all of you for an enlightening discussion. I would like to add one more point related to the discussion on the technical and political aspects. The government may have political will in order to reduce poverty and hunger, but it may not know how to do it. In fact, as Vyas ji said, and I also feel, that today there may be a great deal of allocation in many ministries for programmes dealing with hunger. If you look at the food subsidy, it used to be just 6,000 crores about 10-12 years back, now it's about 50-70,000 crores. So food subsidy has gone up by more than 12 times. If you look at the budget for agriculture, it used to be 500 crores in 2001-2002, now it is about 15,000 crores, so that's a jump of 30 times. So it does show that we cannot always say that government has got evil designs, or that it is only for the corporates, or that it does not care for the poor. One of the aspects is also managerial; it is not able to expend that money well, it is not able to ensure that the delivery reaches the people. In fact, there is no system of monitoring or measuring outcome. So all these systems need to be built. This is very much a managerial question rather than being a political or technical question. So, therefore, the problem has many sides to it and we have to look at all those sides, not to say that any particular

aspect is less important. So friends, I thank all the organisers and all of you for this workshop. Now we can break for lunch and return in an hour.

## **Session II**

### **Technical Session II – Round Table Discussion on Methods for Early Detection of Acute Food Deficits in the Community**

**Chair – Prof. Imrana Qadeer, CSMCH (Retired)**

*Ritu Priya*

I request Prof. Imrana Qadeer to chair this session. Continuing with the methodology that we worked out as optional methods, maybe we could go round the table taking each one and we could see what we think of as its possibilities, its use, etc.

*Imrana Qadeer*

Welcome to the second session. For me it is absolutely delightful to be reminded that I have to talk of anything in public health within an overall political perspective in this institution and I'm very thankful to Vikas for reminding me! I respect what he has done and the only thing that I would like to say is that I assume in a gathering like this we all realise there is no divide between political and technical, because all technical is political. That is why we are here.

We now address a very critical issue. The people who think differently, I'm afraid, are part of the very many minorities that exist in this world and this country at this point of time, and therefore we have to evolve our strategy. And of course, none of us here is accepting the targeting approach; we reject it outright. But what is it that we are saying? We are saying that we are not powerful enough at this point of time to throw out this government and say I will run this country the way I had dreamed of. So, therefore, what are the spaces, what are the little things we can do, which we hope will come together at some point in time? And to me, this is one of those spaces.

We are not making any new discoveries, new methodologies. A lot of this work has already been done and it is there. It is just that nobody wants to take it seriously or do anything about it. I have a Machiavellian mind; I feel that since in this country today everything that matters in public health is reproductive health and sexuality, and everything being done for public health services is for RCH (Reproductive and Child Health) services – and NRHM is also focusing largely on this – and since the only programmes that are getting some respectability today are NRHM and ICDS, I'm wondering if we can use that in some way. To bring through the back door of these, a problem as big as hunger? Women and children are dying of hunger, and what do we do about this? I will leave this discussion to say that, one, you have these tools that the presenters talked about in the morning, and can we take each of them and discuss their value and worth? Can they be used as single tools, or combined? And the other thing is these tools will be used within the specific context of each state, so I request we bring in the state level perspective with the discussion on the tools. Because as we heard in the morning, officials from Bihar are telling us that they are keen to do something. And we need to think, what the contradictions between the centre and the state are, what the limitations and strengths of the state are, and what can be done at the local level. It would be good if we can place the tools in this context.

Before we begin, however, I'd like to say that since morning we have had with us a senior eminent Professor sitting with us and listening to the discussions, Dr. D. Banerji, and I ask him to say a few words and give us something to think about.

*Dr. D. Banerji*

Thank you Chairperson. I was asked if I would like to speak earlier, and I thank you for this opportunity. I shall speak for a few minutes.

The first thing which struck me, which you yourself raised as did Mr. Vijay Pratap, was, why are we so concerned about the measurement of starvation? There is a very strong class linked to this. Classes are not bothered about those who do not die of starvation, but those who die of starvation they at least have a ritual to be performed, and many have said about this so I won't say anything more.

We have the example of the Bengal famine of 1943, and we have seen Satyajit Ray's films on the Bengal famine, where we know what it means to die of starvation. Then we had, rather interestingly and a little positively, the Bihar famine of 1966, where under J.P. Narayan's leadership they arranged for what is called ship-to-mouth distribution of food in Bihar in 1966. And very few people died of starvation. Now this point has been taken up by Amartya Sen in his book *Democracy and Freedom*, where he contrasted the way they handled and averted the deaths due to Bihar famine of 1966 with what happened in China where several million people died of starvation.

Now, there were a few studies in the past that had touched upon the issue of hunger. We had carried out a sociological study in 19 villages in 8 states, and during the course of our intensive 3-month study we were able to find out what is the degree of poverty. And for that purpose we used the question – for how many months in the year do you get 2 full meals a day? And we used a sort of index that those who get 2 square meals a day throughout the year are not poor, and those who do not get are poor. The point which emerged was that, between those who do not get 2 square meals and starvation deaths, there is a huge gap. Because people do not die immediately when they go down the line of not having 2 square meals a day, and when a new harvest season arrives they go up. So there is an up and down movement before starvation death for a large proportion of the poor. And this I think is relevant in understanding this very unpleasant question of measuring starvation deaths.

That was the time when the panchayat system had come into existence in West Bengal in 1977, and it was made the duty of the panchayat and they were given all the wherewithal to ensure that no person will die of starvation.

Another point, and this is not in a negative way – those who are in nutritional pediatrics know that now those 2 dreaded diseases called Kwashiorkor and Marasmus have virtually disappeared; now why has this happened? You can give some possible credit to the government initiatives such as the green revolution and the PDS.

And then we have the sad story of ICDS. When it was originally created, and even though it was not very well designed, ICDS was associated with pediatrics. There was to be a pediatrician in the ICDS. And today we are still struggling with ICDS.

There was a point made by Saxena Sahab about the reference to 2 square meals and the NSS (National Sample Survey). Now, these two are entirely different. The NSS type of data collection is quite different from the type of data collected by us earlier.

And there is, I see, no reference to the National Nutrition Monitoring Bureau of the NIN (National Institute of Nutrition), which has been very often referred to in various discussions on hunger, malnutrition and probably starvation as well.

Thank you very much for this opportunity.

*Imrana Qadeer*

Thank you Dr. Banerji. And now let us go further with these thoughts.

*Ritu Priya*

In the morning the 2 issues that really got raised were, one, the issue about definitions and the second about starvation deaths and its identification. There were the other methods that were also proposed and we need to also go over those. Before that, if anybody has any ideas or issues to be taken up on the definition issue or on identification of starvation, or how to define starvation, living with starvation as well as starvation deaths. If not then we can move ahead.

*Imrana Qadeer*

I had suggested that we raise the level of calories and I would like to hear other responses to this.

*Harsh Mander*

What I broadly understood was that starvation is an outcome of the concentration of acute denial of nutrition on a foundation of prolonged food denial and also other nutritional parameters. It is not an isolated sudden episode; it is an acute episode imposed on a chronic nutritional deprivation and unavailability. And that if we have to identify what is prolonged food deprivation, then we are taking a cut-off of around 1,000 calories for adult men and women – I'm just asking, is that the broad agreement?

*Veena Shatrugna*

I think we are mixing two-three things. See, all studies on famine, starvation have been done in societies where people were first eating normally; let's remember that. They were eating normally and suddenly there was the Second World War, famines, blockades, Dutch famine; there was no food and there was rationing, etc. So, suddenly, there was a fall, and these people subsisted on bread or whatever was given. India is a unique country, and I do not think we have parallels anywhere else. Africa, yes, does have famine and they have wars and everything, but African body composition is such – and this is well-established – that they subsist on a kind of diet where they have a lot of muscle mass. We have a lot of fat in our bodies, thanks to the kind of carbohydrate diet we eat. Africans will die by the time they reach a BMI of 16.5 – it's well recorded. We will survive *and work* with BMIs of 13.5. That is because of whatever *kachra* fat there is under our skin.

The second point I want to make is we are in a situation where – over 50% of our children, but I won't deal with children now – 40% of our adults are not eating what they should be eating. That's why we call them chronic energy deficits, the BMI cut-off. 40% is a huge number, who are not eating adequately. And maybe as a result they are short, because they were not eating well when they were children, and they are thin, because thinness is a reflection of your present nutritional status. To put it in another way, this population *never reached their ideal weight* – I think this is important. They never reached their ideal weight because they never ate enough. Whereas when we are talking of famine and all that literature, those people had normal weights of 70-65 kgs. Our population never reached the ideal weight. So if you look at our mean weight

for women it is 42-43 kgs, which means 50% are below that. Men are about 50 kgs. They have a deficit of 12-14 kgs. When I say deficit, it's not that they lost the weight but they never reached that weight. So the body has adapted to a kind of chronic starvation. And this is the CED classification, Chronic Energy Deficit.

And now this is huge – when they face a drought, famine, or some kind of disaster, what they're consuming is a little more than the BMR level. And this is seen in their diet surveys. They're consuming 1,400-1,500 calories, even pregnant women... in fact Prema's data is there to see. How do they produce these little babies is a miracle. And that's another discussion.

Now when this population starves, for whatever reason, then the food intake comes down drastically to a level where you find that this period of starvation is never beyond one week or ten days, maybe maximum 12-15 days, that's what I remember from some of the verbal autopsies. *They do not have classical loss of weight*, because they do not have any weight to lose, they're already skin and bones. So to do anthropometry is like replicating a data that's already available. What really shakes you up is that the community knows that they do not have any food. You may never get this history from them. But there's a community knowledge that in this family there's been migration, their old people have been left behind, there isn't any job around, they are begging, they are selling their household goods, eating unusual foods, taking loans, selling off animals. So this is a very short phase, in India, and I do not think we have such records anywhere else in the world. Some of them are even willing to work with BMIs of 13.5.

So what do we do in such a situation? They may be consuming 1,400 calories, but it comes down drastically to maybe one or two rotis, which is about 300-400 calories. So it is very difficult to now define starvation on a chronic energy deficit. But I think the closest we can come to is when this large population, with the BMIs of less than 18.5, do not get even that which they were eating. See, if you look at the data it's very interesting. If you see someone with a weight of 40 kgs, you can be sure they are consuming calories just to keep their body at 40 kgs. The moment their work increases, they can go down to 35. But most of the time they are consuming only that much.

So it's easy to work out – they never gained weight because they were consuming so little, and if they reduce food intake any further then it's a disaster. All organ functions will cease after a point, they'll have high fever, the temperature regulation in the brain stops working, there's diarrhoea, there's gastroenteritis, urine outputs go down... and that is when they are reaching the end. But this all happens in a few days time.

So it's wrong to say that they were consuming 1,000 calories. What Imrana and I are trying to say is that starvation cut-off must be placed at a point where anyone who consumes less than the BMR, BMR for their present weight. Ideally, it should be BMR for their ideal weight. Ideally, they should be 55 kgs but they are already 20 kgs less.

Now, ILO (International Labour Organization) and FAO (Food and Agriculture Organization) say that if a person loses 30% of his or her weight, it is starvation. That's another definition. Now when you calculate our weights, they've already lost 25%. So in India, we have to work with our own conditions. And this is there in the literature, especially with the Dutch famine and the Leningrad blockade, etc., that if you lose 30% of your weight you're starving – *but that is if you were normal weight.*

So these are the things before us. I think we must evolve our own frameworks given the terrain in which we are working. And anyone consuming less than 1,000 or 1,200 calories must be presumed to be starving; I think that's the point. I'm sure some of them are living at 1,400-1,500 calories, not even 2,200. And that's the situation which we must address.

*Amod Kumar*

I work for community medicine, and the major problem that we face almost every day is regarding the definition of malnutrition. Is it possible for us to differentiate between malnutrition because of poor quality of food intake... and we categorise malnutrition totally separately. Because a lot of our health workers are in a dilemma about telling people what they should eat, and what they should not. Whereas the families who are actually starving, they do not have food. So we should differentiate that all those who do not have food, having calorie deficit, should be

treated as starvation. And we should stop our health workers from struggling with telling them what kind of food, what kind of dal they should take, how to eat, etc. In fact, the intervention should be to provide better options for that community.

Another thing, as Prof. Qadeer said that there is a lot of emphasis on RCH, I feel that is not true. If you look at the overall one-year trend of how things are available, e.g., iron. Iron may not be available for a substantial number of months in a year in the system. So once we thought that if we could do a survey of a community and see how much haemoglobin was there, so that could be one of the scales of malnutrition. Whether food is available or not, and what kind of food is available.

Another thing, on a lighter vein, I was thinking, starvation is doing a lot of good to people actually. They need smaller houses, they need to spend less money on their houses, and on their clothing. In fact, in most of their houses we can't stand erect but they are quite comfortable in those houses because they are short. So this is an adaptation that is happening, and we are creating a dwarf generation. Like the Lamarck theory, a whole generation is going to be dwarfed! These things have to be kept in mind during our deliberations.

If we could differentiate between malnutrition and starvation; anybody who is not getting enough food should straightaway be labelled as starvation and the government should take alternate action.

*Ritu Priya*

I'm a little uncomfortable... instead of saying we do not use the word hunger – and as Harsh bhai said in the morning hunger is an ambiguous term – and we, therefore, have starvation or adequate food. I do not know whether you can plausibly do that as an argument. Because starvation is a strong word. Can we use it for all situations of 'not adequate food'?

*Harsh Mander*

There's a spectrum of starvation-undernutrition

*Imrana Qadeer*

I tried to bring this clarity in the morning regarding the use of these terms... they are not alternate. It's a physiological condition of deprivation which manifests clinically as weight loss or stunting, as symptoms of vitamin deficiency, etc. So, are we talking of the physiological level, or the clinical level, or the epidemiological level; we must address those. And the moment you talk of food, you are getting into another arena; an arena which says dietetics is going to affect my physiology and my clinical appearance. So that's why hunger is subjective.

The point I was trying to make and I think it got completely misunderstood is that, yes, we get acclimatised to hunger, we do not even feel hungry... and imagine that such a population is today telling you, 'we are hungry'. Does it not become a very important tool of detecting starvation? So we cannot forget hunger. We cannot forget the subjective expression of starvation, which is hunger.

We are today worried about obesity. And we want to say there should be sufficiently adequate logic to say that you are starving. So if there is grain in your stomach you are not starving; what is this? So starvation... historically, even in India, for me, always came together with the term hunger. And it meant acute deprivation, which manifested in whatever way, as hunger. So these terms need to be understood at the levels at which they are.

*Habibullah Ansari*

I have one suggestion, based on the experience in a village called Mohanpur in Vaishali district, where 38 people of the Musahar community died of hunger, or you can say without food. When any community or population is either borrowing food from their neighbours or is begging for food, this is enough indication that they are going to starve or they are going to die. Secondly, acute or continuous unemployment in any community, where there is no work, whether under NREGA or any other programme, and they are suffering from continuous unemployment, is a second indicator that they are going to suffer acute hunger and starvation. Unusual out-migration tells us that there may be distress in the area. Next, the members of the community who are

regularly borrowing money, and the moneylenders are fed-up and complain, 'they are like this only, they do not do any work or earn, keep borrowing money, and do not repay the principal amount or the interest on time'. So where there is such regular occurrence of borrowing or lending, that is another indication that this population or community is under risk of starvation.

Next one is chronic illness and poor health. In the case of those 38 people, it was not medically proved that they died of hunger, because along with the starvation they had Kala-azar. They would have been suffering for months. So this is another indicator, those having prolonged poor health or illness, that could be taken into account. Next one is even if there is PDS, the quality of grain matters. The people there mentioned that the quality of the grain, rice or wheat, is so bad that they say 'why should we waste two rupees on it?' The quality is so rotten that it is not suitable for consumption. So even if there is access through the government channels, it is not feasible for people to use it. So these are some things which have come to my mind based on my experiences in Bihar. Thank you.

*Vandana Prasad*

To take a very liberal view of the strategy... We say that providing food of a sufficient quality for everybody is the role of the state. That will mean an expenditure and investment many times over what is currently being done. Then in that situation, anybody who's saying that they're hungry, or a death occurred because of hunger, that is to be taken as a starvation death unless proved otherwise. And then there can be auxiliary things that we can do to support that, such as anthropometry, etc. These are all auxiliary to the fact that somebody's making a statement that a member of their household died of hunger. The only rider to this is that compensation can't then be cash, and that is connected to what I've said earlier that the general situation is that everybody is entitled to food. And so the answer to that is food, not money or financial compensation. And the primary thing, as many have said here, is that the community diagnoses that this person died because there was hunger.

*Darshini Mahadevia*

Talking of programmatic interventions as well as continuous monitoring, would it be useful to evolve and devise some meso level indicators? Because, in some communities, as you have been saying, there has been chronic energy deficiency. So if one could bring that idea and evolve some meso level indicators for our constant monitoring of hunger. Because whether it's a starvation death or not, there are a number of issues which would have to be contested and answered. And an earlier point made is also linked to that, that if we can have elaborate meso-level indicators, e.g., chronic high MMR (maternal mortality rate), or where ICDS school data is showing low weights, low heights, etc. Whatever data is available in the system, we could follow up in some parts that one knows, with certain communities. And then monitor and then intervene; since this is going to be for intervention, this might be a useful way of beginning. This is similar to what someone else was saying about community level indicators, social indicators.

*D.M. Diwakar*

When we are talking about starvation as a marker of communities, to me there are 3 points we need to consider. One, apropos when are we concerned with starvation? That means there are some set objectives and we are trying to understand from that perspective. And what are those certain objectives? Healthy human beings should have the ability to be properly efficient in society. And then you have the fact that the state and national governments have already made the demarcations of the poor and non-poor categories on the basis of 2,100 calories and 2,400 calories. So are we here to differentiate that let the people remain in starvation below the level of poverty, say 1,000-1,200, or something like that, and then we are trying to understand those issues?

In this connection, I would like to say that we must also reflect on why there is starvation. And that answer will create the set of determinants of starvation. And with those indicators we can look into the level of starvation that the society has.

Someone had mentioned the physical, clinical and other categories; I think these are inter-related, we cannot separate these when dealing with starvation. Therefore, we need to take into

account the basic condition of the poor households, and others have mentioned PDS and other indicators. There are cases where we do not have the institutions but still people are surviving because of different socially unacceptable means, this must be taken into consideration. For instance, you find people from north Bihar during the floods surviving by eating roots taken from water-logged areas, surviving through some illegitimate process of getting some livelihood, and yet they cannot be treated as starved because your calorie norm does not permit that.

So if you want to take starvation as per the policy terms and intervention terms, then we have to go into the ground level conditions. When you talk of the entitlement, it is there, but it should reach. We have fundamental rights, but we do not have access to go to the system, we do not have purchasing power. That kind of ambience is also to be identified as a determinant when we are talking of starvation. And this needs a kind of different intervention package and programme. We have been talking about the ICDS, about PDS, about NREGS, but we also know that these things are not working. And still we are saying that starvation and hunger needs to be related differently, within the framework of poor and non-poor.

To me, it appears that the main thing is the broader issue of access to resources in terms of market and non-market, and then access to public resources through which one can survive such a level of starvation. And then we can come to the cultural issue, taking females in households in certain societies. Here in Delhi you may not have starvation among females as they eat together, but in north Bihar or other agrarian societies, you will find that the females are not getting the same food. On average, the household may not be facing starvation, but the female may be starving. Thank you.

*Amod Kumar*

One suggestion, why shouldn't we take inflation as an early indicator? Inflation of main staple diets of that area. Because it's a simple economic principle, if the demand is more, price increases. If the demand is not being met by the market, that means some people are being left hungry; that's why they are willing to pay more. So I think inflation and the sudden rise of prices should be taken into account if we are talking about acute hunger. That is the earliest sign... any

famine or such distress situation will start with very high inflation. That should be treated as an early indicator.

*Habibullah Ansari*

I want to point out that the average income of 70% of the Indian population is around 20 rupees; so are you going to calculate on that basis? Automatically you can minus that 70% of the population; those who are going to suffer from hunger.

*Amod Kumar*

No, we should see staple diets. Suppose wheat is the staple diet in Delhi and we suddenly see an unusual rise in the price of wheat in a particular area. Something is creating that, either shortage of food or whatever. Basically, people are wanting to purchase and the commodity is not available. If you take dal, etc., those things can be confounding.

*Imrana Qadeer*

Price rise has been mentioned earlier by someone else. I need to reiterate that if we were working at the level of policy recommendations, we know there are certain districts which are extremely vulnerable and the state must work in those, there's no doubt that that is the priority. That the PDS should be strengthened, prices should be controlled, availability should be ensured, etc. Why we are here today is because nothing of this is happening, and the state has conveniently taken a position that it wants a targeted approach. I think what this group is trying to say is, in what way can we broaden that target? And the first thing we are saying is that whether it was primary starvation or contributing to a death, both should be counted as starvation death.

The second thing that we are saying is that this 'at BMR'/'below BMR' does not work, because BMR is measured for a short period and here people are living at that level. Living means they are making some movement, so we are saying it should be between 1000 and 1200 calories. Then we are saying, how else can we expand the vulnerable population? So when we look at a

starvation death, it's not just that family, but how can we broaden it to the community or village? So I request the group to address those kinds of issues.

*Vandana Prasad*

Let's say that all severe acute malnutrition in children classifies as starvation, that's not difficult to do. So all Grade III, all Grade IV and all SAMs according to our studies is starvation. Since there is no computation of adult BMIs through the system... I think that's one critical issue, that there's no surveillance for adults. So we actually have to propose a whole institutional mechanism and then base it on BMIs, using the BMR as the cut-off for identifying starvation.

*Rama Baru*

Going back to what Ritu had said in her presentation. You had looked at acute-on-chronic malnutrition, then looked at hidden hunger, and then came to starvation as a mark of hidden hunger. I thought that was very useful and it summarises many of the other issues raised. So if we could go back to that kind of a definition, so that we are not just at one end but we are able to cover a spectrum.

*Veena Shatrugna*

I feel Habibullah has suggested a very useful set of social indicators. FAO also uses several similar indicators – selling off animals, eating unusual foods, begging, taking loans, migrating; these are all social indicators, they are not usually looked into. And then of course, intake of calories less than 500 – I do not know how they came to *this* number but it's thrown in there somehow.

And he's added something which is very specific for India, which is where the moneylender says these are chronic defaulters, they're useless. I think these are very interesting indicators, and I think working with them on the ground at the village level will be very productive. These do collapse with the FAO's indicators, and he's also added a few more – begging for food, bad quality of PDS which people do not buy, and no employment opportunities. I think we should

work with something that's already been there on the ground, and FAO has similar indicators. Because anthropometry is full of problems; children who are dead, will their siblings be around to give you their measurements; the history taking and verbal autopsies were not easy, they were time consuming and exhausting. There are several problems. So I think his social indicators throw up very interesting points.

*Rama Baru*

I want to go back to one point raised by Habibullah and also raised in Vandana's presentation. Habibullah had said about illness, chronic and prolonged illness. And Vandana had said about case fatality rates for certain diseases and then comparing it to the norm and then using that as a marker for starvation. A little bit of work that I had done where there have been epidemics of gastroenteritis, when you see the patterning both in terms of regions and social groups and you find this pattern fairly well established, based on newspaper reports. So I think that may be an important marker for starvation. Where the causes are attributed to illness, but the roots are actually in unemployment and prolonged lack of access to food, and then some acute-on-chronic episode.

*Veena Shatrugna*

And we have to remember that nobody dies of diarrhoea, if they are dying of diarrhoea, then the underlying cause is lack of food.

*Vandana Prasad*

Lack of access to healthcare services also. Nobody dies of diarrhoea; a large proportion of them die from undernutrition and some will die because there are no rehydration facilities, no health services or facilities.

*Padma V.T.*

We have all agreed at some level that a community involvement in diagnosis for identification is necessary, and we need to shortlist indicators that can be explained easily to people. And those social indicators are very good at explaining to people as to what are the kinds of indicators we are looking for. But as the topic of the consultation says, we also need socio-*medical* tools. And this calories converted to BMR rates, yes, it's making sense from a medical point of view, but if you're involving communities, then how will they be expected to measure the calorie intake or the BMR level? We need to look into that too. But the other suggestion about case fatality rates of some persistent infections within a particular community, that could be another useful quick rough guide to just get into the scene and see if we can prevent the situation from getting out of hand.

*Ritu Priya*

So, just to clarify what we are all saying. One part was about mapping the chronic, those are the vulnerable populations, and second part is identifying when it's becoming acute and worse. Now which is it that we are talking about when we are using these indicators, and we are asking the community to come in on them? If there is heavy out-migration happening in an area suddenly, then is that a marker? Which is not necessarily for constant vulnerability, but it marks a particular point of time. So maybe we want to *differentiate between what we are calling mapping of chronic vulnerability and the acute*. Because that's when we are asking for some more input to come in from the state. And the state is what we are talking about. That was one point.

The second point is that I feel there is a bit of a disjunction in our own minds – we are saying universal PDS, we are saying it has to come from the state, and then we are going to say any death that occurs in a situation like that was due to starvation and hunger. Are we then saying that everywhere that PDS is reaching, hunger means that's a marker that the PDS didn't function there? That's not going to take off, because that's not the reality. So, theoretically, we can do that, but on the ground how can we use that as a marker? We can use it as a marker to push the state and say that you're not performing your responsibility, so we can take somebody to court

for that, but can the community get that action happening? There's a difference between the idea and what you can actually get done on the ground.

*Veena Shatrugna*

You can have universal PDS and have very bad quality of grains as he said. And starvation is about providing the relief and not about going to court later on.

*Ritu Priya*

Absolutely. Exactly. So we have to differentiate between how we are going to examine it, map it; what indicators you use for the two would have to be somewhat different. And therefore we need clarity on which one we are using for what.

*Veena Shatrugna*

See, for chronic there's lots of published material. Caste is one, tribe, SC/ ST, etc; then you have the usual NFHS kind of thing, kachha house/pucca house, etc.

*Ritu Priya*

The problem with that is that the conditions are changing today, we can't use the things that were being used 20 years ago. Today, if you go into a basti in Delhi, the grassroots workers tell me [translated from Hindi] 'you will not find any house today where the kitchen fires are not lit/ burning'. So that's good on one level, but there's what one would call hidden hunger where they're eating half of what they should be eating, but they're not in a situation where they're starving.

*Veena Shatrugna*

Pease do not use the term 'hidden hunger'.

*Ritu Priya*

Ok, the point is well taken because the term 'hidden hunger' is also being used for micro-nutrient deficiencies, pushing for giving micro-nutrient supplements rather than food. We could use 'invisible hunger' instead.

So one issue that we need to get to is what is the terminology? And it's still an open issue, according to me. What are we calling starvation, what are we calling hunger? We can't take our own definitions because at one level it's a good advocacy tool. Because starvation asks for attention, therefore, we call chronic malnutrition also starvation... how tenable is that? These are dilemmas I'm posing. Because advocacy strategies cannot mean that we distort terms, terminologies and meanings. That won't work; what we are saying will get questioned.

*Vandana Prasad*

Two things on which clarification is required. All of us are going towards the community all this while because the community tends to pick up acute things. They're used to their chronic condition that if they're saying that something is happening, then it's something that's acutely happening, and that cannot be denied at all. But is that enough? No. And there I do not think we are only doing it on advocacy grounds if we say severe malnutrition in children, minus 3 Z-scores, is horrible. There's no problem for me to say that is starvation. That is not just an advocacy strategy. And that is something the community will not pick up.

One is wanting to say 2-3 things. One is that any community audit that says this person or this family has suffered hunger and has died from hunger, has to be taken extremely seriously. Then Grade III and Grade IV severe malnutrition in children is not something the community will pick up because it's chronic. So the *chulha* is going, but in that same basti there'll be children with Grade III-Grade IV, but we, as technical experts, say that this is also starvation. And the third thing that I would add to that, is the epidemiological diagnosis of death rates and mortalities. I think that as a process the community is highly important, but it can't be the only source. So this triangulation is required, and addition of things that are technically sound. Not at all compromising on technical soundness for the purposes of advocacy.

So this would be a three-pronged comprehensive diagnosis which does not depend on the community understanding their own degree of deprivation. Which they do not often. Yet it combines that with the statistical tools and advantages that we have.

*Ritu Priya*

I completely agree with you. But I'd like to work that further. So you're saying SAM for children is starvation because it's acute malnutrition.

*Vandana Prasad*

Yes, all SAM and all severe.

*Ritu Priya*

Ok. Agreeing completely on that, I come to a second point. Anything that the community says, that this person or child died of hunger should be taken as that. Yes, after investigation and all. So, here we are again saying identify individual households or persons... identify by individual child. At what level in the community when this happens would you say the whole community requires relief and attention? Because when you want to convert it from an individual to a community level, you have to have rates, some level of rates. One child in a community has severe malnutrition, you do not take it as a community phenomenon, because our levels are so high in any case. Or else the whole country would come into this.

So then we need some level, where we are saying at an endemic level there are anyway so many severely malnourished, but this year it's increased so much that we can now take it as a more serious epidemic problem. And that's a situation of excessive severe malnutrition and starvation that needs extra relief and attention. And the whole point is that this would give us a tool that the administrator can use. Can we discuss that? At what level would we do that? At one level, it's saying something very gross because anyway 50% of our children are chronically malnourished.

*Vandana Prasad*

No, not severe.

*Ritu Priya*

Yes, 50 is moderate and severe, of which about 35 is moderate and 15 is severe. Then if we are saying mild, moderate and severe, it increases to about 75%.

*Veena Shatrugna*

25 is moderate, 25 is severe.

If you want to know about severe underweight, i.e., low weight for age, 25% is severely underweight, that is, less than minus 3 SD. It's about 18% height-for-age and for SAM it's about 2%.

*Vandana Prasad*

There will be overlaps of SAM with severe, because these are different systems.

But this won't be everybody in the country; this will be a little more specific. And we use our understanding of epidemics to say this is what qualifies as an epidemic of starvation in this community.

*Imrana Qadeer*

Please explain the difference between severe and SAM for everybody here.

*Vandana Prasad*

When you're using the classification for malnourished, you're doing weight-for-age. We were never doing heights in the system. Severe Acute Malnutrition is a definitely new term which is

using only two criteria – it's using weight-for-height, looking at thinness; and it's using Mid-Upper Arm Circumference (MUAC) as an index of thinness for children under 5 years of age. And there's also the addition of oedema, which we are not measuring through the system. So currently, we have measures for weight-for-height and we do not have measures for MUAC. So, on those grounds some computation of SAM has been made; and that varies, and I'm not sure how that happens, but it varies from 2% to 15%. So this links with what Veena is saying about the confusion.

*Veena Shatrugna*

Actually, less than minus 2 SD is 15%, less than minus 3 SD is 2.4%. But Gujarat is very high at particular ages, Madhya Pradesh is very high; so some states are like 20%!

*Vandana Prasad*

Severe Acute, as the name suggests, it would be more akin to starvation. It's very easy to say that all SAM is starvation. But one is adding the situation and is saying that all severe, even if that is chronic severe, is still starvation. Because it's not allowing the child to grow and develop, and it will very easily slip into SAM with just one episode of diarrhoea or whatever. I think there's no problem in justifying that all severe can be taken to be starvation also. That is, not severe acute, but severe as we would do it with weight-for-age.

*Ritu Priya*

So, taking a hypothetical example. Say 25% is the aggregate all-India severe, and obviously there will be certain pockets where it's 80% and somewhere it will be 10%. So, can we, therefore, say that when mapping this, where you've got anything more than the all-India, anything more than 25%, is an area which is to be for constant food relief? Also, do we want to take all-India as the figure? But we need some kind of an arbitrary level of cut-off, to say that this is then the marker from which you consider this community to be more affected than others. And therefore, is part of the most vulnerable. When you're saying that is now going into acute,

let's say it was 30 and it's now become 40, you say now that's become an acute episode which needs to be addressed more seriously.

*Vandana Prasad*

Why a further definition? If we have already said that all SAM and all severe, more than the national average 25%, is what we consider starvation. So why do you want to further narrow it down?

*Ritu Priya*

So we have a constant relief mechanism in place? Let's say, we have a double PDS allocation. Ok, now our assumption being therefore that works. And I want that hope to be there. But that is not likely to be the reality for some time to come.

Therefore, what are the tools required? We require a tool if we think it's going to be necessary to identify at that stage; otherwise we do not need the tool. If we are saying we take SAM and severe malnutrition as near-starvation. Now having done that, we are looking at levels in the community, to make it an epidemiological phenomenon. What level are we accepting, if for the sake of argument now we take the all-India rating, and all above that we are taking as a vulnerable community which needs attention. Now that is a constant ongoing, and we expect that everything will work and all the relief will come in. Those are the communities where we know that least relief will actually be reaching. And I'm not hopeful that even if we say this today, tomorrow it will happen. Even if we have a good Food Security Act going which ensures legally that the state is responsible for providing this, I'm still not hopeful that it will provide. So, therefore, will we sit back and say, 'ok, now we have done our jobs', or will we still want to monitor and do nutritional surveys in those areas?

*Veena Shatrugna*

I haven't done this on the ground but after the prolonged discussions we have had in the Hunger Watch Group, what is interesting is that the children with SAM will have adults who've got a

BMI of 20-18.5. So we run into that problem – how is it that the adults are not really CED 3, that is, less than 16? The reason is these children cannot live on the PDS rice. Children require energy-dense foods; which means children require 40-50% of calories from fat. It's very simple, in fact, Samir Garg swears by it. Just give them rice or wheat or whatever, and give them oil. Which we were doing at one time in this country. There's no confusion about this, it's a WHO recommendation. If you can add peanuts and milk powder, that is a bonus for a child. That's all the kid requires – that is plumpynut. So Samir says, forget the rice and we'll just give oil.

Children love rich food, it's not a secret, we all know that. They go for the fried food because it's calorie dense, it's small volumes, it's satiety; that's a security. So you'll run into this problem of 'look, adults are normal'. Adults can eat horrible cereal and suffer it with chillies or onion, but children will not do it. So you'll require quality of diet which can be put in place, it's not difficult. Palmoline, wonderful. It's cheaper, get it, it has no problems at all, it has mono fats. And if you can add red palm oil, you'll be giving them Vitamin A also. There are so many ways of overcoming this problem.

*Imrana Qadeer*

I think we are becoming very descriptive. We have to think also about the administrative conflicts at the centre-state level with regard to provisioning. People who have experience about these conflicts, from the states, should share their thoughts. Not about hunger, but about provisioning. Like, for instance with Bihar, why is it despite all these things the state is not able to move?

*Habibullah Ansari*

The lower level medical officials, those who actually go to investigate, everything is based on their reporting. And that reporting is not correct, not adequate. This is one thing. And they try to define each and every thing in medico-legal terms. So that way no hunger death or starvation death can be defined as such.

*Imrana Qadeer*

We also have to think in terms of the monitoring that is required, who's going to do that? And the state is not willing to accept the figures.

*Veena Shatrugna*

I think that will show up in the data.

*Imrana Qadeer*

Yes, it may show up in the data but there is also the issue that the data is always collected keeping the medico-legal viewpoint in mind and so it does not show.

*Veena Shatrugna*

I meant the NFHS and NNMB data.

*Imrana Qadeer*

Yes, that is national data. What about state level data?

*Veena Shatrugna*

Once we are clear in our minds, this will push in whatever direction... It definitely won't happen in one day. We'll have to push for the states to collect the data, etc. We'll have to move gradually.

*Vandana Prasad*

I think that we do have district level data, we have DLHS-3 etc. And at least on the grounds of what we have, we should be able to say that these are the districts which are above the national average and have to be spoken of as nutritionally vulnerable, and these are the steps that need to be followed. And there's always going to be a 'but' to anything we say... but there's corruption,

but there's no political will, but there's no money. We can't get everything right. But this is just a recommendation that can come. Even from the existing data. We do not have to go freshly to collect this data; it's there available but nobody's taken charge of it and in this particular manner.

*Padma T.V.*

I would add to that. We begin working on what data – by consensus, like NFHS or any survey – is accessible broadly to all of us; and where we are not questioning all of that data. And maybe a smaller group could identify what more data refinement is needed, what supplementary data is needed to help us further in doing this. So we work with whatever broadly accessible data surveys are there now and then continue adding and refining.

*Ritu Priya*

All this will give us an ongoing state of being. So by that we are saying we have identified enough for the administration and we do not want to identify anything else after that in a sense. Then the next year's survey will show up what changes happened and then we'll have to change our map a bit. So then we are happy with saying these are the vulnerable identified communities, there is relief or PDS reaching them, and that's it. We do not need to identify if there's something acute happening somewhere; whether in these communities or anywhere else.

*Vandana Prasad*

We are saying it's acute.

*Ritu Priya*

But this is already the state of being. How is it acute? Your severe are so high already, 20%! So that is an ongoing state of emergency which requires relief in any case. We have got that going. Now, are we then saying that we do not need to look for anything more? Or do we say that these are pointing to some people who are even worse in some pockets? And we need to identify those pockets and get there, some kind of relief.

*Dipa Sinha*

I'm not trying to answer your question, but trying to understand what you're saying clearly. This is a situation where we have 50% malnutrition and something needs to be done about it. What you're trying to say is in this bad situation when something even more acute happens how do we identify it? I think there one could go back to what's coming from the ground. Like say the current situation with last year's drought and price rise, clearly we have seen many more reports of starvation alleged, deaths coming from different areas. And they're not coming evenly from across the country. And we do not feel the areas they're coming from have particularly exceptional civil society or something like that which could explain it. So clearly, Gaya in Bihar, certain districts in Orissa, Palamu in Jharkhand, Shivpuri in Madhya Pradesh, and Baran in Rajasthan, these are areas where the deaths are coming from. And that I think will come when this kind of an acute crisis happens.

The thing is the next level of response – recognizing these as areas where something needs to be happening – is not what is happening. But I think the starting point would be the messages that are clearly coming from the community on the ground that things do not seem to be even the normal; which anyway is not an acceptable normal. So I would see it as coming from there... till we have a perfectly well working anganwadi system where every month you can actually monitor how many are falling into Grade III, Grade IV, or are coming out of it.

*Anant Krishnan*

From this discussion, I see four groups of indicators. One is the environment, the physical environment in terms of broad and exhaustive things. This would be the case for an acute situation, and there would also be some chronic districts. And then as Amod pointed out from the economics; some of these would qualify as environmental determinants. Second would be poor programme delivery set of determinants, this includes food supplementation, ICDS, mid-day meal scheme, PDS, NREGA or lack of employment opportunities. These would be chronic. Third one is more at a medical or individual level, where one is looking at starvation deaths or rates of malnutrition which are higher than average, and we can define what that high is. And

this could be already existing high levels or sudden increase in level from Infant Mortality Rates. I do not think causes of death would be easy to do, I think just the rates should be enough. And finally, the set of indicators which Habibullah pointed out, distress signals coming from community, in terms of begging, borrowing, migration, and selling of cattle. I think these four sets of indicators together should give us a fairly good idea of how to identify communities or individuals where there is high probability of starvation death going to occur or has already occurred.

*Vijay Pratap*

In the discussion of methods for early detection of acute food deficit in the community, food production, availability and access are listed. Now, production will not give us any clue. So can't we strike it off, if we have to move towards some kind of draft resolution? Because otherwise we'll have to go into all the data, what the local production is, how much is exported and imported, etc. So how will you make a formula out of it? Even if we map the local food production where the community resides.

Anthropometric tools you have discussed. And all this we have to relate to the next session, what these tools are for. There are certain tools which you have used in the past, but the governance mechanisms have no possibility of using those tools, e.g., the functioning of ICDS. So this tool which you are likely to develop – and with the kind of tensions and dilemmas you have put on the table, it seems very likely that with the work of a group of 8-10 authors and thinkers you can produce a tool – but we would like to know, and one would like to do advocacy based on that tool, who will use that tool? If the pre-existing tools have not been used and there is an active effort to discourage... so shall we say this exercise is more an exercise in self-learning to learn the linkages of various kinds, which causes starvation, starvation deaths, so that we can collectively go on to the next step of advocacy.

Otherwise, I am at a great loss, because whatever be the quality of the tool, how will that function? At lunch, I was conversing with the gentleman who is the Principal Secretary, Disaster Management, in Bihar and he described how the panchayat functions, how entitlement issues get

played out in the panchayat elections and Vidhan Sabha elections. And he says there is very little hope in getting a tool which will be able to be operationalised. The clarity with which Saxena ji said in the morning session that even while discussing these issues we have to sanitise from the political issues... He did not understand 'the political' in terms of the linkages of various issues which cause starvation, he just thought of it in terms of forming a party and creating an episode called revolution. That was not what was meant by that... in the morning when we said political.

I do not know how many professors around the table would know that when they joined, the disparity between them and the sweeper who cleans their room, how many times that disparity has increased; what the security agency chap gets at the end of his work and what kind of starvation is happening in his village back home. So if we are not a community of human persons and they are just statistics, and we have to know about them only through the tools developed in this room, which is so very different from the outside temperature... then this part needs to be discussed. If you do not want to discuss, at least have some sense of the best possible tool which we will evolve; what will be the efficacy of that tool, who will use that tool, and will it be of any use for the starving people?

*D. Banerji*

Can we try to make some sense out of this?

*Imrana Qadeer*

That comment is absolutely valid and it is for the group to decide what each one wants to do with these tools. I can only say that there can be several ways in using these. One, like it was said in the morning, hunger and starvation and declining food availability is an issue that has been completely marginalised by the politicians who are building an image of shining India. And I think if we can do even the first level of exercise, it will make an effort to break this image in people's minds. Because today the middle class Indian does not at all think in terms of starvation deaths or hunger or children dying due to diseases because of underlying malnutrition. Malnutrition was colonial, it does not exist anymore. I think that is one level of work which is feasible.

The other is that we take this at the level of the state, and I hope that there are people with state level connections and linkages. And even though I do not like the word advocacy, the state officials have to be tackled, they have to be shown this reality. Now obviously it no more remains a mere academic activity after that. You have to think of people who are going to work with you, groups that are working on hunger, give this to them and see what forms of pressures can be generated for the states to move and for local organisations to emerge. This is a long-term thing. And academics has a role, but most of it will be beyond the walls of the institution. So you have to decide where you want to take it.

And in that, my point was that, whether you like it or not, ICDS continues to be a programme on the states' agenda. If you talk about improving the quality of ICDS without being threatening about it being used for other things... just if ICDS is improved, what is the possibility? And I wonder about one thing – everyone says ICDS is bad, the data is bad... so tell me, in this country which data is perfect? When you talk of state level and national level statistics, you have to be aware of the quality of that data, the degree of error which is inherent in every data, and then use it accordingly. So I believe that despite all its weaknesses, even the existing ICDS data, if seen across time, tells you that given the degree of error there is a certain trend. And there are states which do have data, it is not simply absent. I believe we can make a beginning.

So on one hand the pressure to improve ICDS functioning and data collection, and on the other hand using it for your own information, because after all ICDS data lies in the public domain. And I think if we work concertedly, that data can be used to do the kind of monitoring Ritu has in mind. So taking from Vandana, the initiation and putting together of indicators to make first-level assessments to generate information about the seriousness of the issue; at the second level, taking it up at the state level to pressurise the states to pay more attention to the issue and do whatever they can; thirdly, taking care of the ICDS; and last, as I see it, is building bridges with organisations which are working at the grassroots and are trying to raise this issue and mobilise people around it.

That's how I see the relevance of this issue. But always the first step has to be taken, and that first step is that you fulfil the promise that you are making today – that you are going to look at this data, the national data, the DLHS data; you are going to use these indicators; and you are going to then say what is your understanding of vulnerable populations in various districts. At least let us make a beginning from 6 vulnerable states. That in itself will be a useful contribution.

*Vijay Pratap*

Can we envisage some epidemiological study based on the tools you develop for the 6 states; maybe 6 districts, one in each state? Because that will force the state agencies to produce better data with newer tools. If we could do that, this exercise will mean much more to the starving people than if we just develop a tool and depend on the state agencies to produce data on starvation with it.

*Imrana Qadeer*

Regarding this notion of us *developing* a tool... we are simply using different kinds of data, we are putting it together, and we are calling it a tool. Really, I think we are just making intelligent use of what information exists. And that exercise has to be done on data that already exists, and this does exist. So first, let us do that exercise. And if you think that if we take an epidemiological study on the ground then something more will happen... Doing epidemiological studies is not as easy as it sounds. Who's going to do that study? Does any one institution have all the resources to do it? So ultimately for epidemiological work we do often fall back on national level available data, unless and until we mobilise huge amount of resources to do this kind of work. I do not see it as easy; I do not see it as within the capacity of a single institution to do it. Unless it is a collaborative work of a large number of organisations.

*Vijay Pratap*

That would be one of my solutions.

*Imrana Qadeer*

However, that can emerge only once you have proven the value of the ideas developed here. If you can't show it in practice, why should anyone come together? So you have to take that first step. You have developed an idea, it's a very useful idea, now implement it at least on the available data. Then show that in the 6 states where we used it this is what is emerging, this is how it is different from what the officials are telling us. And then you take it forward.

*Ramya P.M.*

I would like to share about one programme, Destitute Identification and Rehabilitation, being implemented through the State Poverty Eradication Mission (SPEM) in Kerala. They identify the vulnerable population at gram panchayat level through the organisational structure of SPEM working in the gram panchayat. There is a three-tiered structure – neighbourhood groups, ward level, and panchayat level. They use a 9-point set of indicators and 7 other indicators to identify who are vulnerable, or starving, or unable to access education, health, housing, food, etc. At the ground level, the neighbourhood groups identify the persons who are vulnerable. At the ward level, they identify what are the projects that have to be made to meet their needs. And they prepare the projects at panchayat level through gram panchayat funding, SPEM funding and also funding from some other NGOs, or the Health Department.

Indicators for finding destitutes – landless staying in revenue lands, forests, etc.; sleeping on the streets; unwed mother/divorced women with child; living unmarried after certain years of age, early married and divorced; person suffering due to a illness and needs continuous treatment; those who are sexually exploited; etc., are some of the indicators. These are different for villages and urban contexts.

*Vandana Prasad*

I want to respond to Vijay ji. I agree with most of what he said, but there are two-three things. The value of whatever we are doing here is at policy level and at ground level. I totally agree that the tools do not hold any meaning for the administration, nor do we have the power, just from creating a better tool or a better system, in getting the administration to change in any way. I

totally agree with that. At policy level it has some use. We are fighting something else, and now I am speaking as an activist. There is a politics of evidence creation around. And you fail when it comes to the end point, where ‘your logic and rationale are fine, but it will cost us too much money’. That is currently what is happening with so many issues with the Right to Food. But what it achieves is that you are tearing at the veil of having evidence insufficiency on your side; on the side that is the pro-poor side. So you tear away the hypocrisy of this notion that all the good evidence and the logic lies with the technical experts and the corporate players, which is what you’re fighting at policy level. So at the policy level you achieve an honest understanding that you are on one side of the fence and I am on the other, and after that it’s a fight for more money.

But at the ground level, I think there is a value, because if you do a Jan Sunwai, for example, and you say ‘this family or this person died of hunger’ and you stop there, that’s it. But if you say ‘this person died of hunger and I have a 6-page report which is more rigorous than the DC would be able to challenge’, and you are a field worker, I think it makes a big difference. And it makes a difference to be able to create those conditions which will shift the policy level debate and create a feeling of ‘yes, a little bit more money is needed, more needs to be done, because there is now a groundswell that understands this issue.’

And I totally agree that nothing can happen in the absence of coordinated work, so I totally support the idea that you do need a large-scale study; if you’re doing a study, it has to be large enough and visible enough. FOCUS was effective precisely because it was large enough in scale and it had people associated with it who could rally visibility for that study. I think that when you need to shift anything in a given environment which is very chronic, you do need to shake it up by having a large-scale operation which has to be well-coordinated. And I think which can be more technical and more academic, and at the same time, it has to be supported closely by groundswell which is simplified and yet also coordinated. So I’m seeing the potential... a coordinated effort which is based on this new exercise we are doing, which is a continuation of many old exercises.

*Vikas Bajpai*

I want to emphasise on one or two things. I think there is a need to have a working understanding of the whole issue of hunger and the way it exists. And to my mind, the best way to gauge the extent and nature of the problem would be to go by how it is felt by the people in the first place. And a couple of possible indicators were mentioned by Dr. Ansari, and also information offtake and all. But whatever we surmise out of this, should be simple enough to be easily understood by people at large. By simple, I do not mean simplistic. Once we concede that there exists severe malnutrition, this itself means people are in dire straits, and beyond that any hair-splitting into SAM and other varieties... we could debate on that and devise tools to measure it and all, but I do not think it is serving any purpose; with respect to either workers working at the field level or with respect to helping the people understand and articulate their problems.

If we go by this basic understanding that it should not be very complex, then devising the tool is also not a very big problem. We can have an effective tool which will facilitate understanding both at the level of the people at large, at the level of the workers, and also serve the purpose of communicating and projecting this problem to the policy makers and the government.

*Darshini Mahadevia*

Listening to the last hour's discussion, I'm going to restrict my comment to the idea of tools. We need to distinguish between types of tools. One is the mapping tool, where there is an inherent problem because of the data lag, and the vulnerability mapping that one would do would be delayed by 1-2 years because it is representing the past situation. But for identification and intervention purposes in acute hunger, we need to discuss tools of different kinds. For example, Padma has been constantly talking about community level tools or the Kerala experience. Wherever there is ground-level feasibility, at least develop tools where communities themselves, if organised or if there are organisations working, could apply these tools and use social indicators and others to quickly come up with a report of status of hunger.

In some situations, the tools could be of interest to the state government itself, as the gentleman from Bihar was saying. In that case what could the state machinery put together, and that could

be another set of tools. They could do the same exercise or there could be just alarmist indicators. For example, in one vulnerable district, say, there is price rise or floods, then one would presume, given our epidemiological understanding and past studies that these are the likely situations, and how would the state government follow up and develop tools for the purpose? And in the long run, obviously, as it was discussed in the morning session, can the local governments be more responsible for data collection anyway? So, I think we need to have short-term tools for various purposes. Because we have been discussing tools but we have been mixing it up as to who's going to use which tool, we need that clarification.

And also with regard to policy and advocacy purposes, we have to talk of creating better data sets at the local level. Even though we spoke about DLHS, in India there are states like Gujarat, and it is a representative example, where the districts are so highly iniquitous that average district-level data does not tell you much. And it is the only state where NSS regions have divided the districts because of the inequality. And so in that case we might need taluka level or block level data. So how is all this data going to come by? And the state gets away because it says that it does not have the data. So maybe we can push in the direction of long-term data collection systems, and some critical information coming in at the panchayat level. They might be fudged and fabricated, but some places and states might do better. So I think we need to look at it in this way to be able to move ahead, especially for intervention purposes.

*Imrana Qadeer*

Thank you everyone, and now we break for tea.

## **Concluding Session – Summarising the Day’s Deliberations**

**Chair – Dr. Veena Shatrugna, NIN (Retired)**

*Veena Shatrugna*

Shilpa will make a presentation highlighting the important points of the day’s discussion, and after that we open the floor for any kind of discussions, modifications, etc.

*Shilpa Deshpande*

These are some of the points on which we agreed upon during the course of today’s discussion. Anything that has been missed out can be added so that we get a sense of what kind of shape the tool is taking.

The overall consensus has been that the tool, to begin with, should be developed such that it can be used by local civil society organisations to highlight situations of distress for vulnerable groups that they are working with. Something that they can use to advocate with the local administration for immediate relief for certain households or populations or sets of communities, based on their already existing work with these communities or populations. So this summary has been organised from that point of view.

So the consensus was that there should be an identification of vulnerable populations on the criteria of consistently reported starvation deaths, the fact that they are Scheduled Castes/ Scheduled Tribes or Primitive Tribal Groups, and essentially using a lot of existing data. And the understanding is that the local civil society organisations will be working with the vulnerable populations and watching for signs of distress. And these signs of distress could be classified, those that are agreed upon, in terms of those at the community level and those at the household level.

We are quickly kind of summarising what could be seen at the community level, which is basically – prevalence above the national or current state average of SAM and severe

undernutrition for 0-6 yr olds; increased distress migration in the population; decrease in market offtake of food, which includes PDS and open market. One of the things that was consistently discussed and decided was that anthropometric measures for adults would be misleading, because given the current levels of BMI which are already existing in large sections of the population, we do not expect any sudden drop in weight. Therefore, anthropometric measures should not be used, but more of social parameters.

At the household level – distress sale of assets; begging for food; consumption of pseudo foods; distress borrowing from moneylenders, or as someone said refusal by moneylenders to lend any more money, but we have to think of how that can be captured; and distress migration.

And it was said that the building of these parameters would then be approved at the national level, either use the offices of the SC, or the CSMCH here, and some other bodies, so that it has that kind of legitimacy, and it can be used by civil society organisations to advocate for relief measures. And the advantage of this is that it will bring rigour into the whole exercise. So the question is, how does this add to the existing work? Because if some organisations are already working with groups, as Vandana said in the morning itself, they would have a good sense of the fact that these groups are now in distress and something needs to be done. But the advantage of the tool is that it will help them to present their case. Specifically if it is approved at the national level as a sensible method to do this, and if they follow this method, it will bring system and rigour to that work. And so this can be used, at least in the beginning, to advocate for relief for these groups.

*Mohan Rao*

Could we use another phrase, other than ‘civil society groups’?

Harsh Mander

Make a change – ‘particularly vulnerable’.

*Vandana Prasad*

I would suggest shift that 'above average prevalence' into the first part, mapping vulnerable populations on the basis of existing data.

And we have missed the point on mortalities from illnesses, that's a sign of identifying hunger at the level of the community – more than average death due to infection/illness, a lot of us had agreed on that.

*Imrana Qadeer*

Mapping of vulnerable populations is one heading. Under that you should have 'using existing data', and obviously, you are talking of nutritional data, mortality data, and so on. If you're talking of reported starvation in that category... I think it should be put separately, because you are then putting hunger. So there needs to be a clarification with words. For example, the second heading, identifying signs of acute hunger, is not separate – it's a part of your strategy to identify vulnerable populations. And hunger, when you are catching it, is called starvation. We are all the time using these terminologies in a confusing fashion; we need clarity.

*Veena Shatrugna*

What you're saying is, using existing data of SC/ST and that population, to locate above-average prevalence of SAM, is that what you're saying Imrana? And then to identify signs of acute hunger and starvation death?

Any other point?

*Imrana Qadeer*

I want that clarity, because are you using it interchangeably or are you using it to mean different issues? And we are doing all this to assess community level vulnerability. So what you're talking of is – what is people's perception of deprivation? Perception and how people perceive is different from what data tells you.

*Shilpa Deshpande*

I think the idea was that we use existing data to identify groups that are vulnerable... because the idea was built on this whole acute-on-chronic undernutrition.

*Imrana Qadeer*

All I'm saying is the last one should be community perception of it, not levels. Because you're talking of indebtedness, migration, food not being cooked...

*Veena Shatrugna*

Mortality from illness is not community perception.

*Harsh Mander*

What about individuals within communities? It's not only communities that have gone into crisis, but we have to also extend it to vulnerability within well-to-do communities. And this instrument I'm not sure would help us identify those. Things like single-women households, etc. I'm just trying to expand the framework a little bit.

The second is the problem of the urban poor. Because a lot of the indicators you're talking about, like distress migration, etc., are about people in rural contexts. I'm particularly trying to think if we want to apply this to the urban homeless population, which parameters would we use, and Vandana and I have been trying to find parameters to establish their food vulnerability and it's not easy in an urban context, because I think the food vulnerabilities are about dignity, about hygiene, it's a complex range of things. They earn enough money to buy food, but it is in a complex social context. A street child earns 100 rupees a day, and Arjun Sengupta said 20 rupees was the poverty line, but clearly, he or she is most vulnerable because of a complex range of factors. And that money is useless because it does not provide a room, clean food, safe water, and protection.

And third question is about states. You seem to have reached a consensus that we would use these instruments to have a civil society mapping and monitoring of hunger and so on. But I think, more so in order to move towards a RTF Act, we are basically saying that a law on the RTF would mean that the states, as central states and at local level, would be accountable to ensure that no man, woman or child is hungry or food deprived or malnourished. In that case I think it is more important to think, what are the instruments which will enable states to map these phenomenon? And what are our instruments to map state's response to ensure that these problems are dealt with?

*Veena Shatrugna*

Shilpa, would you like to respond?

*Shilpa Deshpande*

Not really, because this was our summary of what we felt were the consensus points that emerged today. If there are issues that people feel need to be discussed further, or if anybody feels there are discussions where we have had consensus points but we have missed to put them here, we could include them

*Veena Shatrugna*

But I think his point about special groups should come in. But we have no idea what are the instruments we have for this. Special groups within communities, and this would include disabled, old people, and children...

*Harsh Mander*

I broadly feel that we should look for the child-headed households, etc., and then apply these instruments at a more micro level.

*Veena Shatrugna*

The second point. There's a state response, and what will be our response to the state response?

*Mohan Rao*

We didn't discuss this because there was a consensus that it will be the responsibility of the state to see that there is no acute hunger and starvation, and if it is there that they will act on it.

*Harsh Mander*

I'm worried about enabling the state to do this. The state does not have the political will, does not have the culture of doing this, etc., but it also does not have the capacity. So I think that's a problem.

*Vijay Pratap*

Can you emphasise this point a bit, 'the state does not have the capacity'?

*Harsh Mander*

The way states are presently structured, the kind of data that they collect, the kind of accountability systems that exist, etc., is presumed to exclude the powerless and the invisible.

*Vijay Pratap*

So what is the operational point?

*Harsh Mander*

Can we think in terms of, what are the responsibilities in order to prevent starvation? In an ideal situation, what would be the responsibilities of the central government? Those of the state government? Those of the local government? At which point will they do the analysis of identifying the vulnerable communities and individuals?

*Veena Shatrugna*

Two points. One, we didn't discuss it in the format you are posing it now; it may be too late in the day to start it this way now. And second, I think we are jumping the gun. I think this is a nascent group that needs to work with each other, trust each other, and grow together.

*Vandana Prasad*

I'm speaking from much reflection on the JSA Hunger Watch Group. I feel we had completely missed the 'community diagnosis by the community' part of that, so it's very valuable coming from here. But if we use the pyramid for showing the continuum from malnutrition to starvation, in whatever tools we develop, I would really hold to that. And I would hope that this group would also hold to that because it's quite a comprehensive picture of how things develop into starvation and acuteness. And I feel we have to constantly go back to that fundamental thing. So I would like to incorporate the pyramid into this. And that's a matter of presenting numbers and data; it's an explication of the starvation death in a certain way that encompasses the spectrum of malnutrition and food deprivation. So I would recommend that.

*Veena Shatrugna*

Is there any response to Vandana's suggestion?

*Vandana Prasad*

We could go back and look at that slide again. The tip of the pyramid is the deaths, then underlying that is severe malnutrition, etc.

As far as mapping is concerned, M.S. Swaminathan has done quite a comprehensive mapping of hunger. The better point would be as Harsh suggested the mapping of the response to the mapping.

*Dipa Sinha*

Institute for Human Development (IHD) and World Food Programme (WFP) have together taken the M.S. Swaminathan food insecurity index to the district level, at least in the North Indian states, I'm not sure of the South.

*Veena Shatrugna*

Are there any other responses?

*Vandana Prasad*

So, on the pyramid, what do people say?

*Veena Shatrugna*

Absolutely. There's no contradiction, especially once we are using SAM and severe malnutrition.

*Vijay Pratap*

Related to the issue of using existing data for advocacy and for sensitising the middle class towards hunger and starvation deaths, a point was made about doing some epidemiological studies. I want to say that there are grassroots-level networks that SADED is connected with that are available if such studies may be planned. And there are trained social scientists from among you here that could conduct these studies. And since this was a kind of expectation which was articulated from the floor of this house, it would be useful if we could have some indicative discussion on what kind of studies should be undertaken and what stage; whether one institution or a coalition can undertake these or not; etc. And while thinking about the type of studies, we should not think of the constraints, financial or organisational. That sweep of imagination should be there and it should be reflected in the report.

*Veena Shatrugna*

I feel right now it may not be possible to list out the kind of studies that are possible, after this full day of presentations. But there were suggestions that we form an e-group and we raise questions and perhaps ideas for study that have emerged from today's discussions. And let us see where we go from there.

*Vijay Pratap*

That expectation should be minuted.

*Veena Shatrugna*

Yes. Could you do that Shilpa?

I also think Harsh has already looked at the Orissa tribals, Andhra, and Chhattisgarh.

*Mohan Rao*

If you're suggesting studies, would you also like to say what kind of data you want on a systematic basis? Rather, on a systemic basis, so that you're not dependent on *ad hoc* rounds of data collection.

*Veena Shatrugna*

So we do all agree that we change the calories level from 850 to about 1100 or 1200?

I was speaking with Imrana about this... my statistician at NIN, we were looking at all this massive data, and I was looking at some data from Bilaspur and saw that they have BMIs of 11.5 and 12. And you know how statisticians are so detached from it all. He said, 'when was this collected?' I said, 'maybe one year ago'. And he said, 'go back to those houses, those people will be dead'. It's exactly what Dipa is saying. NFHS data is open source now, just pick up all those

below 16.5, send students to those houses and find out about the mortality... it just goes up 10 times, 20 times, when you go below 16.5.

So I'm just saying that there's so much going on if you're looking at starvation deaths. These are the issues but nobody's documented them. It's there in the literature, maximum mortality are those below 16.5 BMI.

*Harsh Mander*

Talking about mapping state response, these are the *alleged* starvation deaths. This is an important entry point, because you get a sign that there must be serious distress there. One of the things we have done systematically, and are in the process of doing it, is... we thought we'll go back to instances of alleged starvation deaths which are at least 2 years and more, and go back there. So you look through the newspapers and you find out, and there are known cases which stir up some interest for a few weeks, etc. Then you go back to these old cases, and you find out what happened to the rest of the family, to others in the community who were in a similar situation. What were the steps which the government took, if any? Were there accountability systems? Were there any breakdowns? A starvation death usually suggests a total breakdown of all state programmes, the ICDS, PDS, etc., would not have been functioning. Are they functioning now?

We are in the middle of this exercise and, somewhat unsurprisingly but extremely tragically, you find deepened distress, continued mortality, and almost zero improvement in the structure. It's a sad story to keep telling but I thought it's one example of how you can do a mapping of state response and support.

*Veena Shatrugna*

Any other responses?

*Vandana Prasad*

I feel that the point is not that this does not exist, and that is all correct, but we are interested in doing this because it will include a larger, different group of people, and add a whole momentum and weight to this process. Some people could still do the technical Hunger Watch thing and do it in that way, and some people could do it this way, and we could join forces.

*Veena Shatrugna*

And with that I thank all of you for this discussion.

*Ritu Priya*

And thanks to Veena and to everybody else. And also to Shilpa for the summary. I think what we can clearly see is that all of us are committed to working on this issue, and we see the need for coming together and the complementarities that we can bring to this exercise. So one way we could begin is, with an e-group network, and see where sustained interests happen and what common areas of study or action research emerge. We have a list with everybody's contact details, and we'll initiate it by sharing the list itself and then the report later. If anybody has any ideas on what they'd like to move ahead with, then we could put that down and collate it and share it.

I'll end by thanking all the collaborating institutions, the Commissioner's Office, SADED, and Centre for Equity Studies. Also my colleagues, especially Rajib Dasgupta who's helped with the food and drinks we have had through the day. Also the students of the Centre, Lakshmi, Kumaran, Dilip, Dipak, Archana and Shaweta, who put together a lot of the background work in the past 2 weeks, and also Navjyoti who coordinated from the Commissioner's Office. Thanks to all the colleagues and partners and all of you. We will be in touch and continue with the network.

You are invited to tea and snacks upstairs.

*Mohan Rao*

A 1,000 word report of this should be quickly published, perhaps in the EPW.

## **Annexures**

### ***Annexure 1 – Invitation Letter, Concept Note and Programme Schedule***

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

6<sup>th</sup> 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 **13<sup>th</sup> 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) Programme Schedule

## **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, i.e., 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 (10 kgs. 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.

## **Programme Schedule**

Venue: Committee Room, School of Social Sciences-I

Jawaharlal Nehru University, N.D-110067

Date: 13<sup>th</sup> 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
5. Round Table Discussion on Criteria for Defining and Verifying Starvation

**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 and methods for early detection of large scale acute hunger
2. Use of the tools for community monitoring

**3.30-3.45 TEA**

**Future Collaborative Work**

**5.15-5.30 TEA & Snacks**

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

**JNU  
13<sup>th</sup> 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

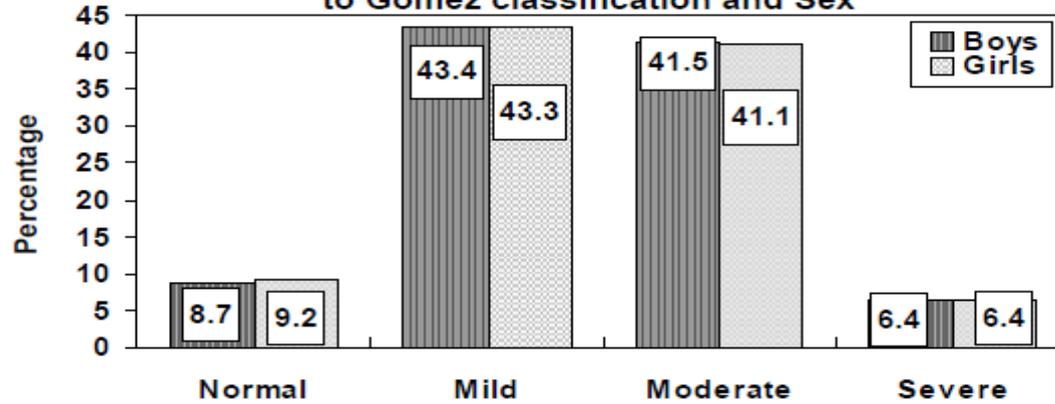
# The Challenge

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

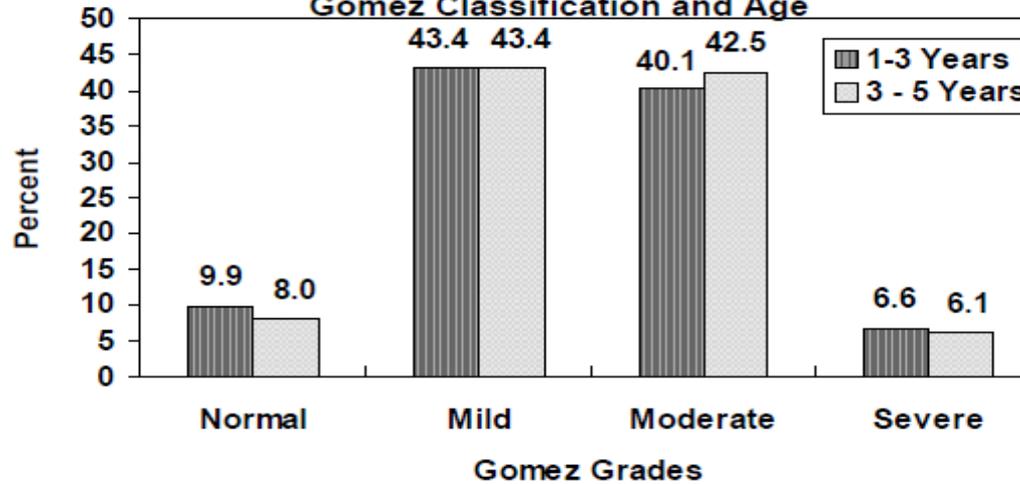
**Adults -- 40% chronically energy deficient**

**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.**

# Hunger Watch

Jan Swasthya Abhiyan

Dr Vandana Prasad  
A Joint Convenor, JSA



# How It Started...

- ▶ **Context of** “drought, crop failure, suicides by farmers, starvation and hunger deaths are pouring in from various parts of the **country**”.....
- ▶ Someone Rt2Fd spoke with someone JSA at the Asia Social Forum, Jan 2003
- ▶ Preliminary meeting there and then

# Hunger Watch Meet

## February 2003, Mumbai

- ▶ The aim: to arrive at a scientific protocol to investigate and document hunger related mortality
- ▶ The participants: Dr. Veena Shatrughna (Deputy Director, National Institute of Nutrition, Hyderabad), Dr. Vandana Prasad (Paediatrician), Dr. Narendra Gupta (Prayas), Dr. Sunita Abraham (Christian Medical Association of India), Sarojini (SAMA and Convenor of MFC), Dr. C. S. Kapse (Professor, Department of Forensic Medicine, D. Y. Patil Medical College), Dr. Neeraj Hatekar (Professor, Department of Economics, University of Mumbai), Sanjay Rode (Ph. D. student, Department of Economics, University of Mumbai), Dr. Abhay Shukla (Co-ordinator, SATHI Cell, CEHAT), Dr. Neelangi Nanal (CEHAT), Dr. Amita Pitre (CEHAT) and Ms. Qudsiya (CEHAT)
- ▶ A comprehensive tool was developed

# The Tool



# Objectives

- ▶ Systematically investigate and document starvation deaths
- ▶ Keep a focus on a community diagnosis of a starving population to gain relief for the entire community not just one family.
- ▶ Use the occurrence of a starvation death as an advocacy tool to highlight the omnipresent undernutrition, and a chronically starved population on the brink of death in case of drought or crop failure.

# Schema for Adults

- ▶ Documentation of recent increased death rates (monthly, tri-monthly) in the community compared to state averages
- ▶ Anthropometric indicators below state averages
- ▶ No mass disasters or other accidents
- ▶ Reduced food off-take from PDS and other indicators of reduced food security like eating unusual foods, increased indebtedness, large-scale outmigration for work etc.
- ▶ Sample dietary histories to assess daily calorie intake, show starvation diets (<850 Kcal per day in adults)
- ▶ Verbal autopsies reveal at least a few deaths in which starvation is an underlying cause of death (irrespective of the immediate cause, which may often be infections etc.)

# Schema for Children

- ▶ Increased death rates among under-five children compared to state U5MR. An exercise must be done to calculate age specific death rates, and compare this with the state averages to define increased death rates.
- ▶ Siblings of children who have died of suspected malnutrition can be assessed. Their anthropometry may show very poor nutritional status and this would be supportive evidence.
- ▶ Access ICDS records/ records from other sources for weight of the deceased child shortly before death if possible
- ▶ High mortality from minor infections (e.g. diarrhea, measles) is itself an indicator that the underlying cause of death is malnutrition. We need to compare mortality rates due to the infection in the sample **community with 'standard' mortality rates for that illness.** If say the case fatality rate for measles in a community is 20% compared to the **known case fatality rate of 2% then the '*measles deaths*' in the community are actually malnutrition deaths in which the terminal event is measles.**

# Activities

- ▶ Initial contact with the community, coming to know about villages affected and anecdotal reports of starvation deaths
- ▶ Selection of village (s) / hamlet(s) to be taken up for the study
- ▶ Assessment of deaths rates in these communities during a specific recent period
- ▶ Anthropometric measurements on a sample of adults and children
- ▶ Dietary survey to assess adequacy of food intake in sample families (can be combined with anthropometric survey)
- ▶ Assessment of any deterioration in food security in the community, based on data about off take from PDS etc.
- ▶ Accessing ICDS weight-for-age records for recently deceased children if available
- ▶ Verbal autopsy in case of selected suspected starvation deaths

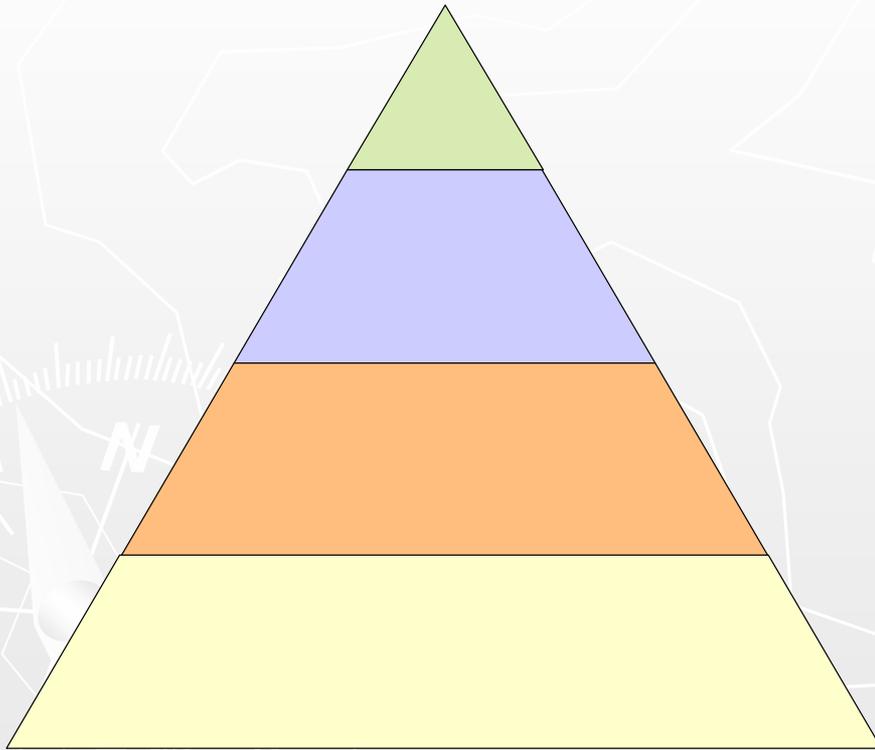
# The Report

- ▶ To verify and certify **starvation death(s)**
- ▶ To clearly detail the prevailing **community conditions** of malnutrition and starvation leading to morbidity (sickness) and further mortality (death) if action is not immediately taken.

# Structure

- ▶ Introduction
- ▶ Under five mortality rates of the given community and comparison with state under-five mortality rates
- ▶ Death rates within the community and comparison with state crude death rates
- ▶ Estimation of malnourished children based on weight for age
- ▶ Estimation of severely malnourished adults based on BMI
- ▶ Details of starvation / malnutrition deaths among children
- ▶ Details of starvation deaths among adults
- ▶ Community situation of food security
- ▶ Hunger pyramid for the community and overall assessment
- ▶ Recommendations

# Hunger Pyramid



Starvation death(s)

Starving Population  
( $< 850$  kcal and SAM)

Severely Malnourished

Malnourished

# Rt2Fd Hunger Watch Workshop Bhopal, August 2003

- ▶ 50 participants attended the workshop with representations from Uttar Pradesh, Rajasthan, Madhya Pradesh, Orissa and Jharkhand, Bihar, Maharashtra, Chattisgarh, Delhi and Karnataka.
- ▶ **“Conceptualized as a part of Jan Swasthya Abhiyan's involvement in the Right to Food Campaign”**

# What Happened Next...

- ▶ The untimely demise of the hunger watch **group....never met again**
- ▶ Field groups take on the protocol in part; Jharkhand, Rajasthan, Madhya Pradesh, Rajasthan etc and adapt it to their competencies and needs
- ▶ Confidence increases in the use of anthropometry

# Why Did It Not Progress in JSA?

- ▶ The collapse of the initiating group in JSA
  - Too much time
  - Too much money (travel, technical expertise, report writing and printing)
  - Too much effort
- ▶ No take over as a coordinated activity by the Rt2Fd Campaign
- ▶ Too technical? Needed some technical expertise and experts.

# Resurrection

▶ **Commissioners' office and validation through Supreme Court**

▶ .....



## Nutritional Trend of 0-6 years Children in Kancheepuram District, Tamil Nadu

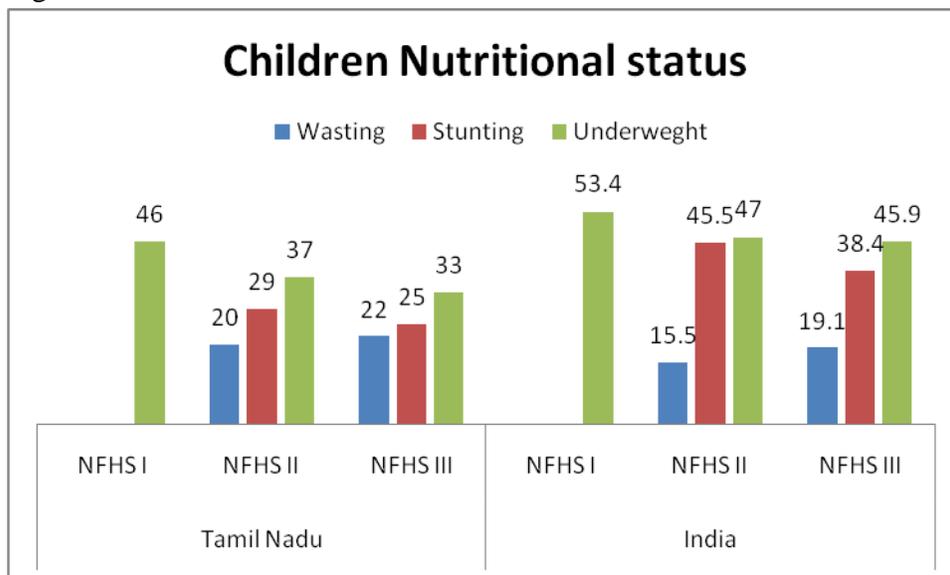
G. Dilip Diwakar<sup>1</sup>

### Nutritional trends of children after 1990's

The anthropometric measures such as the wasting, underweight and stunting are the common measures used in India to assess the nutritional status of the children. Wasting is height for weight, underweight is weight for age and stunting is height for age. NFHS data at the national level shows stunting has declined from 45.5 to 38.4 per cent in NFHS II and III respectively. In case of underweight it has declined from 53.4 to 47 to 45.9 per cent in NFHS I, II and III respectively. The wasting data has increased from 15.5 to 19.1 per cent during NFHS II and III respectively.

If we see for Tamil Nadu, the stunting has declined from 29 to 25 in between NFHS II and III, wasting has increased from 20 to 22 percent in between NFHS II and III, and underweight has declined from 46 to 37 to 33 per cent in between NFHS I, II and III respectively. The nutritional status of Tamil Nadu is better compare to the National level, the underweight and stunting is very less, but wasting is marginally higher than the national level.

Figure 1: Nutritional status of the children of Tamil Nadu and National level



Source: NFHS 3

<sup>1</sup> Research Scholar, Centre of Social Medicine and Community Health, Jawaharlal Nehru University, New Delhi. Correspondence- [dilipjnu@gmail.com](mailto:dilipjnu@gmail.com)

A programme like ICDS should reduce the malnutrition by 2 percent annually, the malnutrition status during NFHS 1 (1992-93) was 51.5 per cent it was reduced to 47 percent during the NFHS 2 (1998-1999), it was only a 0.75 percent decline, which is much less than the desired outcome (Arnold, 2004). Moreover the performance of the programmes has further worsened in between NFHS 2 and NFHS 3, NFHS 3 (2005-06) shown 1.1 per cent decline in 7 years, i.e 0.16 percent decline annually. Even the maternal and child health, immunization and child feeding practices have not shown much improvement in annual per cent points between 1992-98 to 1998-2005, rather there was decline in most of the indicators (Srinivasan et al, 2007). It clearly indicates that in the post liberalization period there is not much improvement in the nutritional status of the children it has become almost stagnant.

We have to understand two different phenomenon to understand the trends in nutrition. First we have to understand the nutrition status over a period of time and secondly we should know the change in nutritional status in a specific year. In a year the nutritional status of the children will not be the same. As the nutritional status of the children is largely dependent on the food availability at the household level. Based on the agriculture season the food availability of the household varies and it has direct implication on the children. If the food availability continues to be low for a longer period of time it will affect the children's nutritional status and even it can have irreversible effect on children.

This understanding of the household level food security will help the government and the policy makers to address the under nutrition appropriately. Though it is region specific but state specific policy can address the problem of under nutrition in a better way. Though there are data available at the national and state level over a period of time but there are no studies at the micro level to look into the changing nutritional status of the children in a specific year.

So an attempt has been made to look into the changing nutritional status of children in Sriperumbudur block and Achirapakkam block, Kancheepuram District, Tamil Nadu for a specific period of time to have an understanding on change in nutritional status of children in different period of a year.

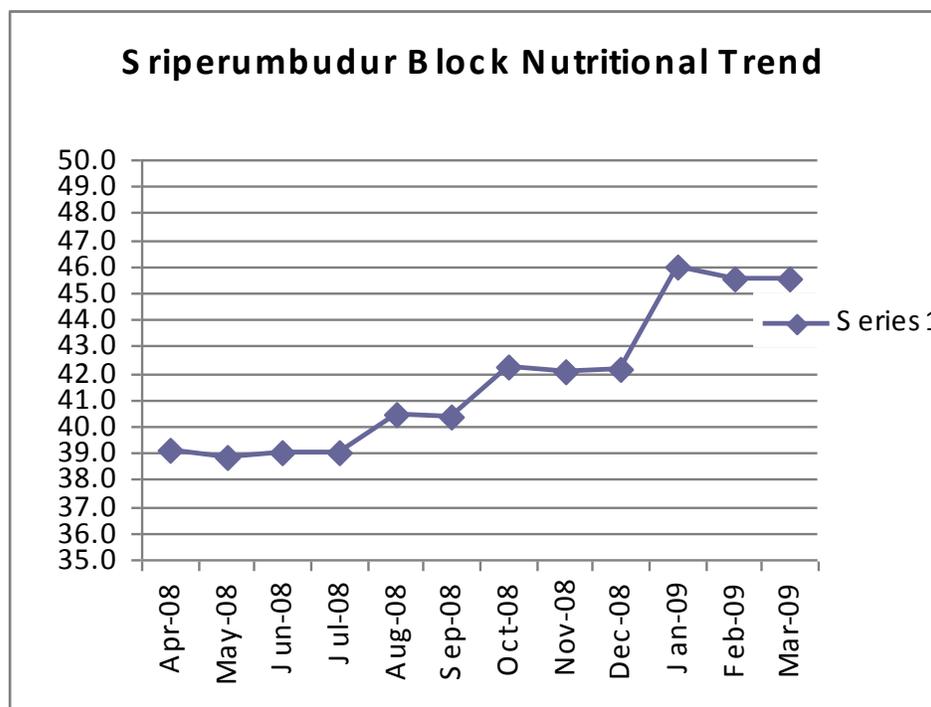
### **Study Method**

Kancheepuram is one of the districts in Tamil Nadu. According to the Tamil Nadu Human Development Index, it ranks second, next to Chennai. It is developed in terms of education, percapita income and longevity. The industrial development in Kancheepuram is one of the contributing factors for the development, but it is predominantly based on

agriculture. Moreover, it is very close to the Chennai, so they have access to health, education and other basic amenities, government schemes and services. There are 15 blocks in the district, though it is a developed district not all the blocks are homogenous and uniformly developed.

Some of the blocks are fully urbanized, as the study aims to look into the rural villages, the block having more than 25 per cent of urban population according to 2001 census were not exempted. Among the remaining blocks an index was developed based on the nutritional indicators available at the district level. In which Sriperumbudur was among the better performing block and Achirapakkam was among the poor performing block. So these two blocks were selected to see the nutritional trend in a year. The data on mild, moderate and severe malnourished children in 0-36 months was collected in both the block.

In Sriperumbudur data from April 2008 to March 2009 was collected to see the variation of malnourished children over a year. When we look at the range, the minimum number 38.9 per cent of malnourished was recorded in the month of May and the maximum 46.0 per cent was recorded in January. The mean percentage of malnourished was 41.7 per cent.



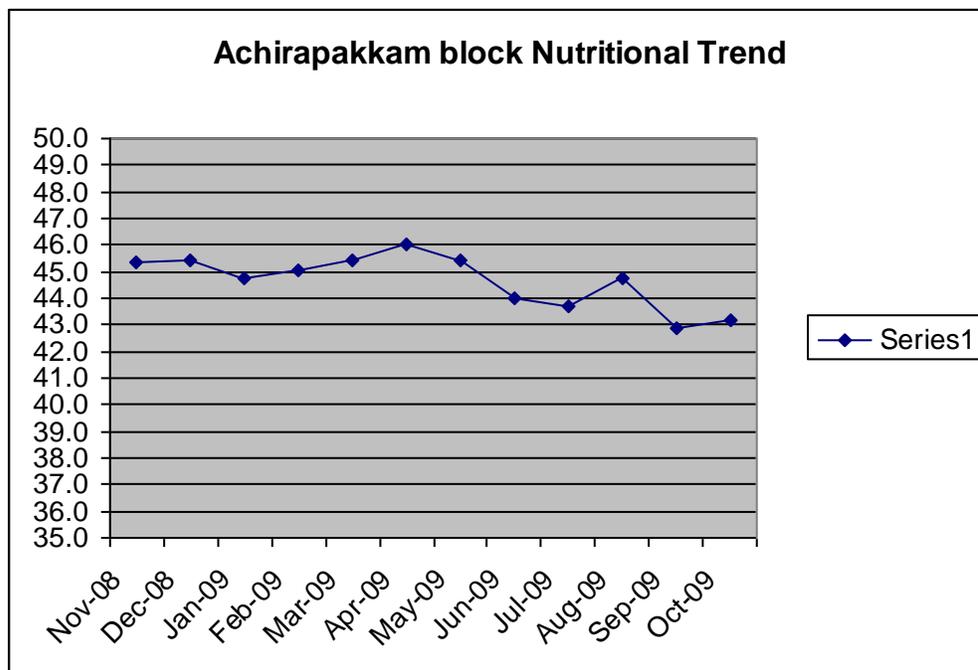
Source: Collected from Block office

If we see the chart it clearly shows from April to July 2008 there is not much increase in the malnourished children they all fall in around 39 per cent. But after July there is a slight raise in the malnourished children from 39 per cent to 40.4 per cent in August. In August and September it is almost stagnant. Latter from September to October there is a slight raise, it reaches 42.2 per cent. But from October to December it is almost stagnant. Then again in January it raises to 46 per cent and again it falls down to 45.5 percent on February and it steadily maintains for March.

If we get the disaggregated data on mild, moderate and severe malnourished then it will give a clear picture on which type of malnourishment is increasing or decreasing in different season. But all together it shows there is a rise in the malnourished children in the Sriperumbuder block, with lot of fluctuation. It might be based on the agriculture season and other factors depending on the harvest or the lean season. Especially after the summer season if there is no monsoon rain and there is no crops in Kharif season the number of malnourished children may raise steadily till the harvest of the next season. As there are fail in monsoon rains the dry regions especially dependent on the rainfall of agriculture will get worst affected.

In case of Achirapakkam the data on malnourished children was collected from Nov 2008 to October 2009, though it is not comparable between Sriperumbudur and Achirapakkam as their reference period are different. But it will help us to get an idea of the nutritional trend in different season in Achirapakkam block.

When we look at the range of the Achirapakkam block the minimum 42.9 per cent of malnourished children was recorded in September 2009 and the maximum 46 per cent was recorded in April 2009. The mean of malnourished children in the block is 44.7 percent.



Source: Collected from Block office

Unlike Sriperumbudur the nutritional trend in Achirapakkam shows a declining phase though it starts with 45.3 per cent malnourished but ends with 43.2 per cent. Though there is fluctuation it is not as steep like Sriperumbudur. The malnourished children decreases slowly from 45.3 per cent in November 2008 to 44.7 per cent in Jan 2009, then slowly it raises and reach the maximum of 46 per cent in April 2009. From April is steadily declines and reaches 43.7 per cent in July and again it raise to 44.8 per cent in August. Latter the malnourished children falls down in September to 42.9 per cent. The malnutrition curve is looking like a wave it raises and falls in different season.

## A note on indicators used by current early warning systems for assessing acute food insecurity in India and their increasing irrelevance

### I. Colonial roots of the current early warning mechanisms for capturing food insecurity:

Current early warning mechanisms have their legacy in famine codes developed during British times. The primary focus of early warning system in these codes was based on the assumption that food insecurity will arise due to agriculture production failure and resultant scarcity. Amartya Sen in his well-acclaimed work on 'Poverty and famine' has written much about the limitation of the colonial assumption and the resultant inability to act during the Bengal famine.

Harsh Mander and Sana Das in separate studies show the colonial assumptions about causes of food insecurity is largely retained in the scarcity codes and drought manuals followed by different state governments.

### II. Key indicators used in the scarcity codes and drought manuals:

In order to capture and assess acute food insecurity the scarcity codes and drought manuals conceptually make distinction between 'normal period' and 'scarcity period'. The key focus of codes and manual remains in 'scarcity period' which is defined as any time when the agriculture crops fail beyond an 'acceptable limit' resulting in the potential food security threat for the regions.

The prime methodology to capture the decline in agriculture production beyond an 'acceptable limit' is done through conceptualisation of the following three types of droughts.

1. Meteorological drought: (Rainfall related)
2. Hydrological drought: (Ground water shortage)
3. Agricultural drought: (crop failure- pest and climate, fodder, price failure)

As reflected in their names the three types of droughts are related to shortages arising due to natural causes.

The details of the indicators used to identify the scarcity situation and the frequency of their collection is indicated below:

Details of drought monitoring and information system

Parameters	National level agencies	State level Agencies	District level agencies	Field level agencies	Mode of communication
<b>Meteorological drought</b>					
Delay in the onset of monsoon	W	W	D	D	Wireless/Fax/Telephone/E-mail
Dry spell	W	W	D	D	Wireless/Fax/

**Prepared for National Consultation on Socio-medical Tools  
for Identification of Acute Hunger**

Parameters	National level agencies	State level Agencies	District level agencies	Field level agencies	Mode of communication
during sowing					Telephone/E-mail
Dry spell during critical crop sowing period	W	W	D	D	Wireless/Fax/Telephone/E-mail
<b>Hydrological drought</b>					
Water availability in reservoirs	W	W	D	D	Wireless/Fax/Telephone/E-mail/ Written reports
Water availability in tank	F	F	F	W	Written reports
Stream flow	F	F	F	W	Written reports
Groundwater flow	S	S	S	S	Written reports
Soil- moisture deficit	F	F	F	F	Written reports
<b>Agriculture drought</b>					
Delay in sowing	W	W	W	W	Wireless/Fax/Telephone/E-mail
Sown Area	W	W	W	W	Wireless/Fax/Telephone/E-mail
Crop Vigor	F	F	F	W	Written reports
Change in cropping pattern	W	W	W	W	Wireless/Fax/Telephone/E-mail
Supply and demand for agriculture inputs	W	W	W	W	Wireless/Fax/Telephone/E-mail/NICNET

Source: Manual for Drought Management, Department for agriculture and cooperation, Ministry of Agriculture, Government of India, November, 2009.

### III. A review of changing vulnerability in rural India and requirement for new indicators to capture periods of acute food insecurity:

Three prime changes that characterize the changing vulnerability of rural India include:

**Prepared for National Consultation on Socio-medical Tools  
for Identification of Acute Hunger**

- 1) Shift in work force from agriculture towards non-agriculture casual work. In 1983, 68.5 per cent of the workforce depended on agriculture and contributed 40 per cent of GDP. In 2004-05, the dependence reduced significantly to 56.5 percent of workforce, which only contribute 20.2 per cent of GDP.
- 2) Increase in the proportion of landless population in India. The proportion of the households that did not cultivate land, increased by 10.6 percent during this period during 1993-94 to 2004-05. Prof. G.S. Bhalla, show that the proportion of farmers holding marginal land (.002- 1.00 ha) increased from 62.8 per cent in 1991-92 to 69.7 percent in 2002-03. The concentration ratio of ownership holding declined sharply between 1991-92 and 2002-03, and reached almost the same level as before the land reforms.
- 3) The overall changes in the cropping pattern and the decline in yield has resulted in reduction in the food grain production and availability. Prof. Utsa Patnaik shows that the per capital food grain production and availability is reducing since 1990s' and has reached dangerously low level in first half of 2000.

In other words, the current focus on agriculture production failures may fail to capture times of acute hunger faced by (a) large section of people who are shifting away from agriculture and face livelihood based vulnerability, (b) small and marginal farmers who no more produce food grains (earlier produced for self-consumption) and who are exposed to the price fluctuation in the market.

Prepared by:

M. Kumaran,  
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## Self reported hunger and surveillance for measuring acute hunger through community surveys-

### *A note on potential use and limitations*

#### 1. What is meant by 'self-reported hunger'

Peoples' perception over their own (and household's) experience of hunger is termed as self reported Hunger. The perception depends on people's judgement of fulfilment/un-fulfilment of the physiological urge to fill their belly.

In order to collect this perception, a simple question is usually asked to the respondents; "*whether they were able to get two square meals every day*". The question is usually asked about a household, where the respondent shares the kitchen and may also eat together with other members.

#### 2. What is its' relevance in measurement of acute hunger?

It is possible for a person to survive on less than adequate food, involving irreparable damage to human body and life, and still not feel hunger pranks. This is mainly because one feels the hunger pranks when she begins to reduce food intake in face of current or expected food shortage, but as days pass and the lower food intake becomes a routine the human physiology get adjusted to reduced food intake and one do not feel the hunger pranks. However such adaptation means living a vegetative state of life where people withdraw from normal and necessary biological and social functions of life and faces heightened morbidity and mortality risk.

In other words, use of 'self-reported' measure to assess chronic food shortage may not capture the 'real hunger' as determined by scientific standards for ensuring fuller life potential. However the measure may be useful to capture sudden dips in food security during short-run, which translates into reduction of 'quantity' of food intake. However as it has the potential to capture reduction in food intake experienced by households who are currently able to access food as per existing nutrition standards, it might also include otherwise food secure households.

In fact the NSSO survey of hunger (which will be discussed below) captures high proportion of the respondents who reported hunger from high Monthly Per Capita Expenditure (MPCE) groups. For instance, analysis of NSSO data in 2004, shows that, fifty per cent of the respondents in Haryana who reported hunger came from highest MPCE groups. Similarly, the figures were 40 per cent (top 4 MPCE groups), 50 per cent (top 5 MPCE groups), 56 per cent (top 5 MPCE groups), 100 per cent (top 5 MPCE groups), 50 per cent (top 4 MPCE groups), 100 per cent (top 7 MPCE groups), 40 per cent (top 3 MPCE groups), 25 per cent (top 6 MPCE groups) for Andhra Pradesh, Madhya Pradesh, Arunachal Pradesh, Nagaland, Pondichery, Rajasthan, Tripura, and Kerala respectively.

Similarly analysis of NSSO data on self reported Hunger shows good potential to measure food security seasonally, with dips and ups in figures over months in a year.

### **3. What are the merits of using self-reported hunger vis-à-vis other measures?**

The single most merit that self-reported measure has over other anthropometric and food-intake measures, is that it is simple, non-technical, less resource intensive and easy to use survey method. Therefore they come handy for rapid assessment to timely capture sudden crisis in fluctuating environment, where there is a need to take immediate decisions to save lives.

Secondly, unlike other survey where analysis over time points involving regular surveys is essential to capture acute hunger, use of self reported hunger will enable capturing acute hunger at a time point. Therefore for assessing decline in food security in locations, where complaints of food shortage has come, the self-reported hunger can be useful tool.

### **4. Have studies used this methodology?**

Many studies have used self-reported hunger. In one of the pioneering studies, Prof. D. Banerji, in a study of 19 villages finds that over half of the households were not able to access two-square meals a day. Nearly, one-third of the households in the study villages had only a single meal per day during slack agriculture periods. Among these households, the poorest, who are landless labourers reported to go hungry on many days without a square meal a day at times when they did not get wage labour.

Similarly, Centre for Environment and Food Security (2005) covering a sample of 1000 randomly selected tribal households from 40 sample villages in Rajasthan and Jharkhand found that 25.2 percent of surveyed tribal households reported not having two square meal in the previous week of the survey. 24.1 percent of the surveyed tribal households did not have two square meal in the previous month of the survey and around 99 per cent of the tribal households were not able to manage two square meal at some point of time (at varied level) during the previous year.

### **5. Do official surveys use it?**

Yes, the thirty eighth NSSO round in 1983 made an attempt to statistically measure 'hunger' in India, by asking people's perception about their hunger status. During this round of consumption expenditure survey, questions were added on availability of two square meals a day. The results showed that around 19 per cent of households in rural India and 7 per cent of households in urban India reported that they did not get adequate food through out the year.

After 1983, the question was again included in fiftieth NSSO round in 1993-94 and in all subsequent round. The results of the survey are presented in the table below.

## Self-reported hunger in India from 1983 to 2004-05

Year	Per cent of population reporting hunger	
	Rural	Urban
1983	18.54	6.33
1993-94	5.1	1.6
1999-2000	3.3	0.9
2004-05	2.4	0.5

Source: GoI (1993),<sup>1</sup> NSSO (2001c)<sup>2</sup> and NSSO (2007c).<sup>3</sup>

#### 6. Are official estimates reliable? Have they used the methodology correctly?

Some of the important lessons about potential pit fall in using this methodology can be learnt through critical assessment of official methodology for assessing self-reported hunger.

- a) Some studies based on these figures have inferred that hunger has reduced in India. However, this is erroneous conclusion as this is not a good measure for chronic hunger. Further there are many other methodological weaknesses that prevent us from drawing such inferences.
- b) Secondly the chosen respondents were head of the households. The Expert Group (GoI, 1993), Discussed the problem of relying on the male head of households for the information on hunger experienced by other family members.

Very often, particularly in rural India, the head of the family, usually a man, who is the main respondent in the survey, would not be sufficiently aware of the quantity and content of meal left for his wife and other female members of the house. Therefore, this data would probably give only a broad idea about the perceptions of the people on adequacy of food GoI (1993:54).

Prof. Amitabh Kundu (2006), objects to use of this data for the same reason. He notes:

Researchers as well as policy makers believe that the figures grossly underestimate hunger due to the reluctance on the part of the head of the

<sup>1</sup> GoI (1993), 'Report of the Expert Group on Estimation of Proportion and Number of Poor', Perspective Planning Division, Planning Commission, New Delhi.

<sup>2</sup> NSSO (2001c), *op cit*.

<sup>3</sup> NSSO (2007c), *op cit*.

households in publicly admitting their incapacity to provide for their respective families (Kundu 2006: 120).

- c) Third issue with the official methodology is that they have used different questions to elicit responses in different years which are not comparable. Prof. Deaton and Dreze (2008) pointing out that data 'as suggestive' and not 'definitive' note that

the phrasing of the question is not identical in different years, there may be translation issues, and the changes from 1983 to 1993–94 are suspiciously large in several states such as Bihar and Madhya Pradesh (Deaton and Dreze 2008: 11).

- d) Fourth issue with the methodology is that not all the sample respondents are asked the question related to hunger. The interviewer judges the respondents and poses the question only to those households who she/he perceives to be in risk of hunger. In 2004, around 56 per cent of the respondents were not interviewed but only judged<sup>4</sup> to arrive at a conclusion that they did not face hunger. Moreover the question of self-reported hunger actually comes in the beginning of the survey, even before asking demographic and consumption details from the respondents. Therefore, the manner in which judgment was made is a puzzle.

## **7. What are the other problems associated with the methodology in general.**

- a. It is not an objective measure of measuring hunger. Commenting on the limited reliability of the data as an objective measure the Expert Group notes:

It has to be kept in mind that the information regarding the adequacy or inadequacy of food for consumption, elicited through a single probing question, may not always be free from subjectivity and at the same time may not be adequately precise and objective. For instance the size of 'square meal' would differ not only from person to person but also from place to place (GoI 1993:53).

- b. The reported hunger also depends on the level of consciousness and awareness of the people. This is primarily because it is not only level of hunger but also realisation or worry about anticipated depletion. Therefore people who are politically conscious are able to report it better.

For instance, the survey results of NSSO showed high prevalence of hunger in states with higher human development and income such as Kerala and Tamilnadu when compared to other poor states such as Bihar, UP and Rajasthan. The paradox of relatively high health and human development indicators in these states along with high prevalence of hunger, could be resolved by contextualizing it with the fact that these states are also considered to have good public action as reflected in functioning of PDS (Swaminthan, 2000) and ICDS (Drèze, 2005). It would not be

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<sup>4</sup> Out of 79,298 households, the enumerators judged by themselves that 36258 (52 per cent).

difficult to agree that varying level of awareness over rights would affect the articulation of the problem.

**8. How can the methodology be improved?**

1) It would be useful to choose women as the (or one of the) respondents in household survey.

2) The questions related to other coping strategies associated with hunger could be usefully incorporated in the interview schedule. These would provide important contextual clues to assess the validity of the self-reported hunger. Some of the coping strategies associated with food-insecurity, developed by Daniel Maxwell and Richard Caldwell is listed below.

1. Dietary Change

a. Rely on less preferred and less expensive foods

2. Increase Short-Term Household Food Availability

b. Borrow food from a friend or relative

c. Purchase food on credit

d. Gather wild food, hunt, or harvest immature crops

e. Consume seed stock held for next season

3. Decrease Numbers of People

f. Send children to eat with neighbors

g. Send household members to beg

4. Rationing Strategies

h. Limit portion size at mealtimes

i. Restrict consumption by adults in order for small children to eat

j. Feed working members of HH at the expense of non-working members

k. Reduce number of meals eaten in a day

l. Skip entire days without eating

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## Biological Stress and History from Below: The Millet Zone of India 1970-92

Lalita Chakravarty

Study of biological stress signals helps to construct history from below. In this chapter, an attempt has been made to interpret biological stress signals and their evolution over three decades in a country like India, where mass poverty has been, and still is, written large.

The millet zone of India (Gujarat, Karnataka, Maharashtra, and Rajasthan) was studied over the period from 1970 to 1992. This zone suffered from repeated famines, big as well as small, throughout the last decade of the nineteenth century (Maharatna 1996a). Biological stress signals of heightened mortality rates in the populace of a particular administrative area would be accompanied by a fall in conception rates. Birth rate would also fall as crop failure due to droughts hit the area. Famines would be declared, generally later than the appearance of early warnings of "slump" in agricultural activity and employment; death-toll would rise from month to month; there would be relief camps for dislocated communities which, in turn, would be victims of epidemics. The catastrophe would take its toll, both in terms of the dead as well as in terms of those who failed to be born. Agricultural dislocation due to "slump" would, however, abate and disappear when monsoon rains reappeared. The present story of biological stress signals begins in the early seventies in the millet zone, with exactly such a scenario of "slump" famines,<sup>1</sup> as marked by the two signals,

<sup>1</sup> There are two types of entitlement failure in the literature, i.e., a failure of entitlement caused by lack of employment and a failure of entitlement due to fall in real purchasing power. "Slump famines" refer to the first whereas "boom famines" refer to the second. This chapter discusses situations of short-term entitlement failure though trend factors are working in favor of "food security" (Dreze et al. 1995).

namely, heightened mortality rates and a dip in the birth rate, adjusted for a nine-month lead. As the story proceeded to the early nineties, "slump" famine was replaced by "boom famine" of much smaller magnitude. Evolution of many institutions in the intervening period has also taken place.

To build the story around biological stress signals we need the following six presuppositions:

1. Heightened mortality and depressed fertility of a short duration are easily discernible from random fluctuations if appropriate statistical tests are applied. These statistical tests are stated under sign tests and simultaneity criteria as far as mortality indicators are concerned; sign tests for fertility indicators (FI) are briefly stated in section II.
2. There is inequality in death between the poor and the non-poor and between the two sexes. The former was commented upon by Pressant while discussing mortality patterns in different countries of Western Europe during industrial revolution in the respective countries. We shall not dwell upon it here. It is one of the basic assumptions and is related to assumptions regarding micro units that are listed as fifth and sixth assumptions.
3. Men are responsible for the material reproduction scheme of an agrarian society and women for the biological reproduction scheme.<sup>2</sup> As we shall connect heightened mortality rates to "entitlement failure," either through employment failure or through depression of real wages or of real earnings in

<sup>2</sup> It can be shown with the help of N.S.S. data that, to date, men and women of this subcontinent are differentially "responsible" for two different reproduction schemes. Men are entitled to rewards for being responsible for "work" and thus keeping the material reproduction scheme going. Women are responsible for keeping the biological reproduction scheme going and thus are not "primary workers." If we analyze a set of three dualities, namely, the duality of primary versus secondary worker, the duality of labor market exchange versus household (reciprocity mode) exchange, and the duality of ownership rights to the material means of production versus usufruct rights only, then we can see that the first claim of higher entitlement as a primary worker, busy in the labor market and free to own, are men and men only. This note summarizes earlier work by the present author (Chakravarty 1991; Agarwal 1994).

Idea, Sen, Nayyar (2001), Public Health & the Poverty & Reform: The South Asian Medicament.

kind, our main focus will be on mortality pattern of men. Mortality signals of the two genders (M for men and F for females) rather than on fertility signal (FI) will be discussed in section II. Infant mortality (I) and heightened mortality of children (C) will be brought in as corroborative evidence only but will not be the central focus.<sup>3</sup>

4. The event of entitlement failure precedes epidemiological outbreaks in the post-independence India, when old killers like cholera or smallpox have been brought under control and new killers like endemic tuberculosis, AIDS, or hepatitis B have not given rise to new outbreaks of epidemics. In the period of stagnant health transition in a poor country, the main culprit need not be any particular disease and need not even be declared "starvation death." A host of endemic diseases flare up when there are "gaps" or even prolonged periods of "reduced caloric intakes," and the attrition rate rises (Fogel 1989, 1994; McKeown 1976; Zurbrigg 1992, 1994).
5. This presupposition is regarding micro units that suffer attrition. Consumption loan or consumption grant (CLG) is essential in many agronomic tracts where dry spells, if prolonged beyond the usual three months of pre-monsoon inactive period, mean starvation for the casual agricultural laborers. Dreze (1995) has shown that other occupational groups that are in poverty or even those which are relatively better off also suffered a precipitous drop in calorie intake in 1972-73, when large tracts of Maharashtra were in the grip of severe drought and crop failure. It is assumed here that the lower strata of these groups of "poor" do need consumption loan and/or grant when entitlement fails due to "slump" in activity. It is further implied that if

<sup>3</sup> Women in the reciprocity mode, working as "helpers" or secondary workers only, are worse sufferers under conditions of biological stress in the sense that they are hit first by intensified hunger and prolonged "gaps" in calorie intake as and when the "shock" begins. If the shock is inflationary price rise, they suffer longer than men. Indices of "fertility failure" are thus important for the study of gender-differentiated biological stress. We have not brought in either the data or relevant analysis in this chapter. As far as infant and child mortality are concerned, these indices have been thoroughly discussed and used by Maharatna (1996a, 1996b).

inflationary price rise of food grains reduces the real value of money wages, then also consumption grant/loan is required to prevent rise in attrition rates. This second scenario, however, may be different from the first "slump" scenario. The second scenario means "boom" for members of the upper strata of rural and agricultural occupations who can sell some marketable surplus. Two necessary conditions for entitlement failure are: (i) geographical boundary of both labor circulation and commodity circulation is narrow and the same; and (ii) there is no institutional support to the base of real agriculture wages.

6. This assumption is regarding adjustment between price rise, wage rise and the length of the CLG period. Though the ex ante length of the period of CLG is essentially dependent on the rate of inflation (or duration of "slump" in case of droughts), the ex post length of the duration of CLG is equal to the wage-price adjustment lag for local casual agricultural laborer. These assumptions regarding "entitlement failure" in the context of "boom" in agriculture, as well as in the context of slump induced by natural calamity are essential for "mortality" signals. These assumptions go well with the long-term trends in India where real wages have not deteriorated in spite of steady inflationary pressure on food prices, and in spite of the fact that agriculture and rural territory sector have emerged as labor-sinks. Entitlement failure in any geographical area and drying up of CLG due to institutional failures are two necessary conditions for linking deep poverty and biological stress signals.

## II

Basic data used here are age-specific mortality rates (ASMRs) published by Vital Statistics Department (Office of the Registrar General of India) in their periodic bulletins, Sample Registration Survey (SRS) Data. These data can be arranged in a matrix, where the rows give annual mortality rates for ages 10 to 70+, given in five-year age brackets. Infant and children mortality as separate age-cohorts are ignored. These last two, however, enter the last reading of the row, where "all age" mortality is given. Thus there

are 14 readings of "mortality rates" in any row pertaining to any calendar year. Any column of this matrix, however, gives a time series covering 1970 to 1992. Marking peaks between two lower readings and reading along any one column will give the nature of random fluctuations in any one of these 14 columns, as peaks defined in this way are also "turning points" (Nagar and Das 1990). Tests for random fluctuation do indicate that each one of these 14 time series is full of random elements, much more so than standard mortality data of advanced countries would show.

There is, however, a qualitative test, "sign test" in short, which can be performed on the rows of this matrix to test whether some calendar years are full of random peaks and thus qualitatively different, i.e., qualitatively worse than the adjacent years. Moreover, by fixing a carefully-chosen base year and sliding it down the period 1970-92, any current year ( $t$ ) may be compared to the "base value" and tested for "mortality signal," as contrasted to random elements in both the years. This is basically "indexing by shifting base" to take care of the trend factor.

Ten or more "peaks" out of 14 readings in a row pass the sign test at 10 percent and 5 percent significance level. This is a "strong result" according to our method of detecting any one year of biological crisis. However, we do take into account nine peaks as "weak result." But they do demand attention because of some specificity of the grouped data that could be discussed under "cohort effect."<sup>4</sup>

We could do this test on adult male mortality only to isolate years of "biological stress" and then look for causative factors. In

<sup>4</sup>An age cohort ( $x+4$ ) in period ( $t$ ) may suffer and lose some members due to stress in this period and carry forward some who are morbid and also near the upper end of the age limit ( $x+4$ ). Thus, a heightened mortality at  $t$  in age group (25-29) may get carried forward to ( $t+1$ ) in age-group (30-34). Therefore, there is often high degree of co-relation between two adjacent columns in the vicinity of crisis periods in age-groups 30 to 40 years. Adjacent rows, however, go through a process of adjustment immediately after a crisis period which may be explained in terms of new entrants of better health status entering a particular age-group. New entrants may also have different relative weightage between "poor" and "non-poor." The two attributes, "health" and "poverty" are of course highly correlated by one basic presupposition of this chapter. Net result is that after a peak in period ( $t$ ) in age group ( $x+4$ ), there is a relative dip in period ( $t+1$ ) for the same age-group. This very often goes a long way in giving a "weak" sign test for a calendar year that follows a crisis period.

order to give more substance to the idea of biological stress at a particular point of time, we supplement male mortality signal ( $M$ ) by female mortality signal ( $F$ ) and female infant mortality ( $I$ ) as well as female child (0-4 years) mortality ( $C$ ). Thus if simultaneously four groups of data, male, female, infants, and children show higher than contemporaneous mortality rates, then we get a "complete stress signal." However, some of the groups, such as children, infants, or young mothers may not show stress as they are target groups for policy measures. We then get incomplete stress signals. It is obvious that various combinations of "strength" and "completeness," or their absence, are possible and may be found to be interesting as "leads" to causal factors.

A third aspect of this "stress mortality signal" is to do with the downward time trend in Indian mortality data, though the present data-set would rather not be subjected to parametric time-trend analysis. If we choose a fixed base, any normal year, for comparing a crisis year mortality then we get an idea regarding the comparative severity of the crisis. If we shift the "base" from 1970 to 1980 and then to 1990, we get some idea of de-trended short-term fluctuations. This is like a fixed-base index, whereas the other method is like a chain-base index. A crisis year can be isolated by any one of these two methods, but due to strong trend factors in mortality, stress signals of the eighties and the nineties come into sharp focus when "fixed-base year" is recent or when chain-base method is used. Although no difference has been made between the two methods in the tables given here, it will be relevant to keep the above factors in mind. The distress signals of the 1991-92 period are far below the attrition rates of the early seventies. This is "trend effect."

We have described the tests for "mortality stress signal." A crisis year that is noted for biological stress must also indicate a fall in birth rate, adjusted for a nine-month lead in conception index. All the SRS bulletins give crude birth rate, total fertility rate for rural areas and total fertility rate for urban and rural areas combined {CBR, TFR(R), and TFR}. If all the three indices show a temporary dip then fertility indices are moving in the same direction and FI is clear. If, however, CBR gets disjunct from TFR, say, due to rising net reproduction rate and/or due to quick replacement births, then the fertility indicator is giving an enigmatic response and we take due note of it.

Table 11.1  
Gujarat: Stress Signals, Mortality Behavior, and Causal Variables

(1) Years of "Stress"	(2) Drought	(3)	
		AGCLPI (3A)	Increase (3B)
1970**			
1971	D/P		
1972	D/T		
1973**W			
1974	D/T	24	-9
1975**WA		dx	-dx
1976		-17	dx
1977		dx	dx
1978		dx	12
1979		7	10
1980		10	12
1981(*) W		16	dx
1982	D/T	dx	11
1983* AW		12	dx
1984	D/P	dx	11
1985	D/P	dx	dx
1986	D/T	dx	13
1987	D/T	10	dx
1988**A		dx	dx
1989		16	12
1990		12	24
1991		17	dx
1992*W		20	dx
1993			dx

Source: Government of India 1970-93.

We may now turn to the adjoining tables. When mortality stress signal is complemented by fertility drop, we put two stars against that year to show that full biological stress is indicated. If fertility signal is enigmatic, then we put only one star, i.e., only the mortality signal indicates some kind of biological stress. However, the mortality signal itself can be weak (W) when either M or F (male or female mortality) does not cross 10 peaks, and is short by one reading. If the mortality signal is incomplete, either due to absence of any one or two of its four components, which happens very often with I and/or C, then that absence is indicated by the letter A next to the stars. Although emphasis has been given to mortality stress signal, it has been considered important to complete the picture of stress as borne by women by marking out those years when both

Table 11.2  
Karnataka: Stress Signals, Mortality Behavior, and Causal Variables

(1) Years of "Stress"	(2) Drought	(3)	
		AGCLP (3A)	Increase (3B)
1970			
1971			
1972**W	D/P		
1973			
1974		24	-dx
1975*A		dx	-dx
1976*WA	D/P	-12	0
1977**W		dx	-dx
1978		-dx	dx
1979		11	19
1980		15	17
1981		24	-dx
1982	D/P	-dx	15
1983		14	dx
1984*WA		0	0
1985	D/P	0	0
1986	D/P	-dx	11
1987		10	20
1988		20	dx
1989		12	dx
1990	D/P	dx	25
1991**A		19	-13
1992*A		23	-dx

Source: Government of India 1970-93.

M and F are "weak," but fertility crisis is very strongly indicated. This is indicated by one star within brackets.

Turning to the causal factors we come to examine two of these, namely, drought that may be total or partial (D/T and D/P)<sup>5</sup> and inflation rate as reflected in consumer price index for agricultural laborers—CPIAL, annual rise in two complementary calculations (as in Chandak's series, who uses financial year—April to March—averages, or alternatively, agricultural year averages—July to June—lagged forward one period), as given in columns

<sup>5</sup> Data were supplied by S.R. Sikka, Director of the Meteorological Division, at the request of Prof R. Ramaswami of the Centre of Physical Sciences, Jawaharlal Nehru University, New Delhi. Mean rainfall is calculated for twenty years and negative standard deviation is "drought." If all agro-climatic regions are affected, then it is total drought (D/T); otherwise it is D/P.

Table 11.3  
Maharashtra: Stress Signals, Mortality Behavior, and Causal Variables

(1) Years of "Stress"	(2) Drought	(3)	
		AGCLP (3A)	Increase (3B)
1970			
1971	D/P		
1972**A	D/P		
1973(*)AW			
1974	D/P		
1975			
1976			
1977**A	D/P		
1978			
1979			
1980			
1981	D/P	20	-
1982		-	13
1983		+	dx
1984*AW	D/P	+	dx
1985	D/P	+	dx
1986	D/P	-	-
1987	D/P	dx	dx
1988		dx	dx
1989		20	dx
1990		dx	33
1991**		27	dx
1992*AW		17	-dx

Source: Government of India 1970-93.

3A and 3B.<sup>6</sup> When annual point to point rise is between 5 and 9 points only, dx has been put in the columns.

It is clear from the above tables that till 1977 natural disaster like drought produced mortality signal in all the four states of the millet zone. This was the period of "slump little famines." A new phase begins from 1980-81, when mortality signals start becoming weak and incomplete.<sup>7</sup> Definitely, they do not appear

<sup>6</sup> H.L. Chandak's series can be obtained from CMIE 1994. The agricultural year averages have been provided by Abhijit Sen of School for Social Sciences, Jawaharlal Nehru University, New Delhi.

<sup>7</sup> There is an exhaustive official literature on various "public works" programmes. For unofficial but exhaustive research work one may consult Dev (1996) and Dev, Parikh, and Suryanarayanan 1994.

Table 11.4  
Rajasthan: Stress Signals, Mortality Behavior, and Causal Variables

(1) Years of "Stress"	(2) Drought	(3)	
		AGCLP (3A)	Increase (3B)
1970			
1971			
1972*A	D/T		
1973**			
1974	D/P	33	-21
1975		-10	-dx
1976**AW		-17	+37
1977		21	-dx
1978		-dx	+14
1979	D/T	dx	+18
1980		19	dx
1981**AW		12	-dx
1982	D/T	-dx	+dx
1983	D/T	+dx	11
1984**W		+dx	11
1985		16	-dx
1986	D/T	-dx	17
1987	D/T	-dx	14
1988**		25	+dx
1989		13	14
1990		13	16
1991**AW		dx	dx
1992*AW		dx	17

Source: Government of India 1970-93.

as and when droughts are declared. If at all mortality rises, as it does in the state of Rajasthan, then it is with a lag when "relief" to drought is dismantled (as in 1981 and 1988). Double stars do appear, indicating a full biological crisis in 1991 in the states of Karnataka, Maharashtra, and Rajasthan; Gujarat followed suit in a weaker way in 1992 when poverty index rose in all states and also for all-India level.

What are the factors that may account for this sudden reappearance of mortality signal? It was not price rise alone. The floor value of wages collapsed as all "public works" were stopped under SAP and no other institutional support for consumption loan or grant (CLG) replaced the older institutional support. In

short, the evolutionary process of better crisis management was reversed by SAP in 1991-92.

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## PART III

## Shifts in Health Services AND HEALTH FINANCING

The importance of the public sector in health needs no belaboring, given the proportion of South Asians living under poverty. The World Bank has played an increasingly significant role in changing the patterns of investment and production in health and associated sectors, depending upon the country's pre-reform status. The weakening of existing structures is tragic, given the investments made by previous governments to create the essential infrastructure. This section explores the neo-liberal thrust of the current adjustment programs which, in chasing corporate profits, transform and weaken public sector health services by segmenting and universalizing it, irrespective of regional diversities. The first three chapters take up state-level analysis for India. The rest present national perspectives from the region on overall or specific services.

Raman Kutty provides a succinct account of HSR being followed in Kerala. Acknowledging the need to change the financing and organization of current services, he queries the options being offered. Baru provides a cogent overview of the funding of health services at the state level in India and its relationship to SAP. She argues that SAPs are transferring the profitable elements of health care into the market, leaving only underfunded and poor quality essential packages for the poor. Prabhu compares and contrasts how the investments in health services and the health indicators of two states, Maharashtra and Tamil Nadu, are being affected by the current reforms. She meticulously explores the nature and trends of these effects and offers some interesting insights into the complexity of inter-sectoral linkages.

Akbar Zaidi argues that the major factors contributing to the improvement of Pakistan's HDI over time have been high

## FACT SHEET

**Percentage of children under age 3 yrs, who are wasted, stunted and under weight**

Report	Wasting	Stunting	Under weight
NFHS-I	NA	NA	52
NFHS-II	16	46	47
NFHS-III	19	38	46

<b>State-wise Percentage of Children under age 3 years as Undernourished on Anthropometric Indices (Stunted, Wasted or Underweight) of Nutritional Status (as per NFHS-III) in India</b>			
(2005-2006)			
States/UTs	Nutritional Status of children as per NFHS III in India		
	Stunted (too short for age)	Wasted (too thin for height)	Underweight (too thin for age)
Andhra pradesh	34	13	36.5
Arunachal Pradesh	34	17	36.9
Assam	35	13	40.4
Bihar	42	28	58
Chhatisgarh	45	18	52.1
Delhi	35	16	33.1
Goa	21	12	29
Gujarat	42	17	47.4
Haryana	36	17	41.9
Himachal Pradesh	27	19	36.2
Jammu & kshmir	28	15	29.4
Jharkhand	41	31	59
Karnataka	38	18	41.1
Kerala	21	16	28.8
Madhya Pradesh	40	33	60
Maharashtra	38	35	39.7
Manipur	25	8	24
Meghalaya	42	28	46.3
Mizoram	30	9	22
Nagaland	30	15	30
Orissa	38	19	44
Punjab	28	9	27
Rajasthan	34	20	44
Sikkim	29	13	23
Tamil Nadu	25	22	33
Tripura	30	20	39
Uttar Pradesh	46	14	47.3
Uttaranchal	32	16	38
West Bengal	33	19	43.5

**Table 12: Trends in Child Nutrition: NFHS Data**

	Proportion ( per cent) of children under the age of three years who are undernourished				
	NCHS <sup>1</sup> Standards			New WHO Standards	
	1992-3	1998-9	2005-6	1998-9	2005-6
Weight-for-age					
Below 2 SD	52	47.0	45.9	42.7	40.4
Below 3 SD	20	18.0	n/a	17.6	15.8
Height-for-age					
Below 2 SD	n/a	45.5	38.4	51.0	44.9
Below 3 SD	n/a	23.0	n/a	27.7	22.0
Weight-for-height					
Below 2 SD	n/a	15.5	19.1	19.7	22.9
Below 3 SD	n/a	2.8	n/a	6.7	7.9

The data for children under five in 2005-2006 is similar to the above.

per cent of under-fives suffering from: underweight, moderate & severe	43
per cent of under-fives suffering from: underweight, severe	16
per cent of under-fives suffering from: wasting, moderate & severe	20
per cent of under-fives (suffering from: stunting, moderate & severe)	48

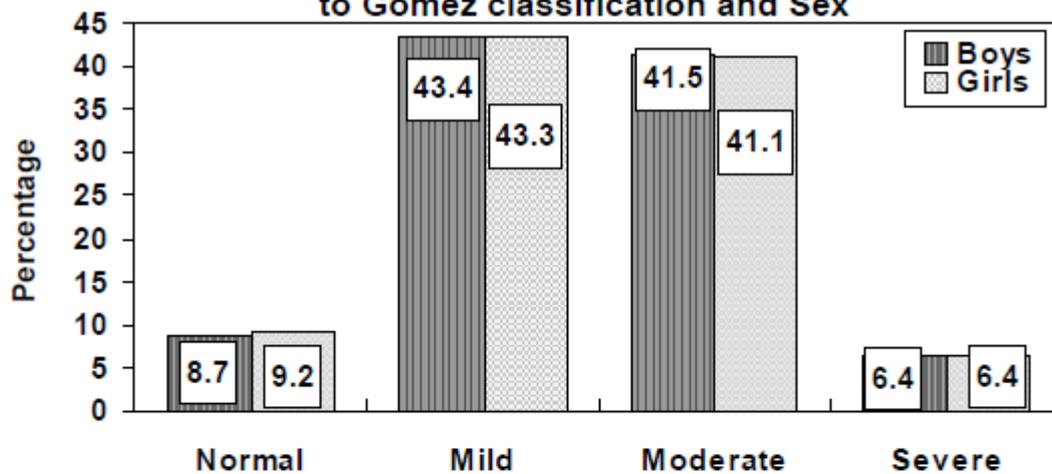
source: [http://www.unicef.org/infobycountry/india\\_statistics.html](http://www.unicef.org/infobycountry/india_statistics.html)

### Gomez Classification

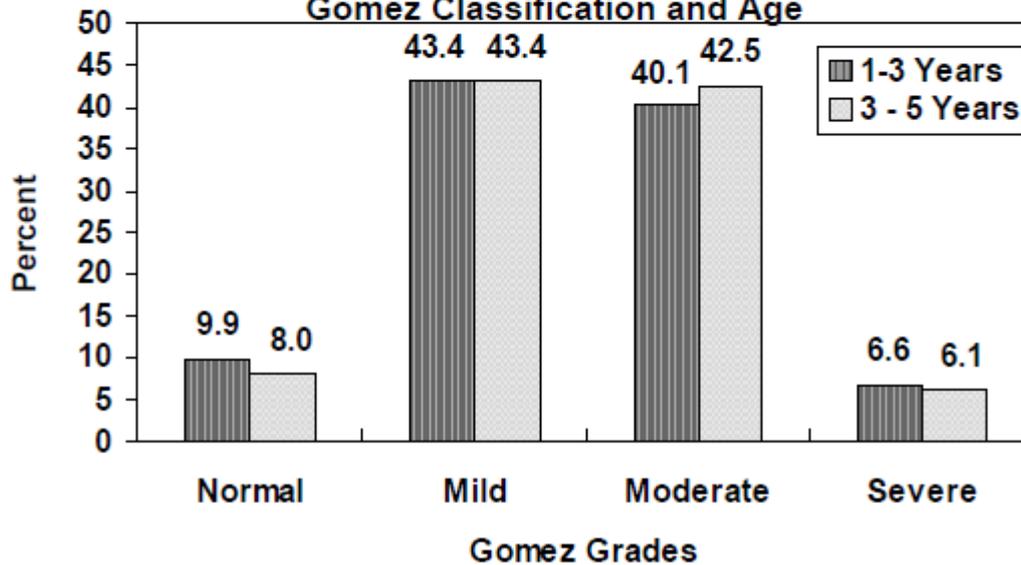
Weight for age (% of NCHS Standard)	Nutritional Grade
≥ 90	Normal
75 - 89.9	Grade I (Mild under nutrition)
60 - 74.9	Grade II (Moderate under nutrition)
< 60	Grade III (Severe under nutrition)

<sup>1</sup> Until 2006, the World Health Organization (WHO) recommended the US National Center for Health Statistics (NCHS) standard, and this was used inter alia in the first and second rounds of the National Family Health Survey. In April 2006, the WHO released new standards “based on children around the world (Brazil, Ghana, India, Norway, Oman, and the United States) who are raised in healthy environments, whose mothers do not smoke, and who are fed with recommended feeding practices” (International Institute for Population Sciences, 2007, p. 268). These new standards were used in the third National Family Health Survey.

**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**



**Distribution (%) of 1-5 years Children by Nutritional Status (Weight for Age) - Gomez Classification**

State	Sex	N	Nutrition Grades*			
			Normal	Mild	Moderate	Severe
Kerala	Boys	191	17.3	55.0	26.2	1.6
	Girls	184	24.5	45.7	27.7	2.2
	<b>Pooled</b>	<b>375</b>	<b>20.8</b>	<b>50.4</b>	<b>26.9</b>	<b>1.9</b>
Tamilnadu	Boys	540	10.4	51.3	34.8	3.5
	Girls	501	10.6	49.9	35.7	3.8
	<b>Pooled</b>	<b>1041</b>	<b>10.5</b>	<b>50.6</b>	<b>35.3</b>	<b>3.7</b>
Karnataka	Boys	411	7.1	44.5	46.2	2.2
	Girls	339	7.4	46.0	44.0	2.7
	<b>Pooled</b>	<b>750</b>	<b>7.2</b>	<b>45.2</b>	<b>45.2</b>	<b>2.4</b>
Andhra Pradesh	Boys	439	11.8	49.0	36.0	3.2
	Girls	398	11.1	48.2	35.7	5.0
	<b>Pooled</b>	<b>837</b>	<b>11.5</b>	<b>48.6</b>	<b>35.8</b>	<b>4.1</b>
Maharashtra	Boys	406	6.2	40.6	45.3	7.9
	Girls	341	10.6	38.4	44.6	6.5
	<b>Pooled</b>	<b>747</b>	<b>8.2</b>	<b>39.6</b>	<b>45.0</b>	<b>7.2</b>
Gujarat	Boys	390	6.7	40.8	42.6	10.0
	Girls	328	8.2	47.3	36.9	7.6
	<b>Pooled</b>	<b>718</b>	<b>7.4</b>	<b>43.7</b>	<b>40.0</b>	<b>8.9</b>
Madhya Pradesh	Boys	381	5.5	29.7	49.6	15.2
	Girls	363	6.1	31.1	48.8	14.0
	<b>Pooled</b>	<b>744</b>	<b>5.8</b>	<b>30.4</b>	<b>49.2</b>	<b>14.7</b>
Orissa	Boys	382	9.2	39.0	44.2	7.6
	Girls	392	4.3	38.8	50.0	6.9
	<b>Pooled</b>	<b>774</b>	<b>6.7</b>	<b>38.9</b>	<b>47.2</b>	<b>7.2</b>
West Bengal	Boys	319	7.8	42.9	43.9	5.3
	Girls	341	7.0	43.1	41.9	7.9
	<b>Pooled</b>	<b>660</b>	<b>7.4</b>	<b>43.0</b>	<b>42.9</b>	<b>6.7</b>

Sex	n	Nutrition Grades*			
		Normal	Mild	Moderate	Severe
Boys	3459	8.7	43.5	41.5	6.4
Girls	3187	9.2	43.3	41.1	6.4
<b>Pooled</b>	<b>6646</b>	<b>9.0</b>	<b>43.3</b>	<b>41.3</b>	<b>6.4</b>

\* : NCHS Standards

**Distribution (%) of 1-5 years Children by Nutritional Status (Weight for Age) - Gomez Classification according to age**

State	Age (Years)	N	Nutrition Grades*			
			Normal	Mild	Moderate	Severe
Kerala	1-3	211	24.2	46.4	27.5	1.9
	3-5	164	16.5	55.5	26.2	1.8
	<b>Pooled</b>	<b>375</b>	<b>20.8</b>	<b>50.4</b>	<b>26.9</b>	<b>1.9</b>
Tamilnadu	1-3	571	10.7	51.8	33.6	3.9
	3-5	470	10.2	49.1	37.2	3.4
	<b>Pooled</b>	<b>1041</b>	<b>10.5</b>	<b>50.6</b>	<b>35.3</b>	<b>3.7</b>
Karnataka	1-3	392	9.9	43.4	44.1	2.6
	3-5	358	4.2	47.2	46.4	2.2
	<b>Pooled</b>	<b>750</b>	<b>7.2</b>	<b>45.2</b>	<b>45.2</b>	<b>2.4</b>
Andhra Pradesh	1-3	441	12.2	48.8	34.5	4.5
	3-5	396	10.6	48.5	37.4	3.5
	<b>Pooled</b>	<b>837</b>	<b>11.5</b>	<b>48.6</b>	<b>35.8</b>	<b>4.1</b>
Maharashtra	1-3	381	9.4	41.5	42.3	6.8
	3-5	366	6.8	37.7	47.8	7.7
	<b>Pooled</b>	<b>747</b>	<b>8.2</b>	<b>39.6</b>	<b>45.0</b>	<b>7.2</b>
Gujarat	1-3	375	7.2	42.7	39.5	10.7
	3-5	343	7.6	44.9	40.5	7.0
	<b>Pooled</b>	<b>718</b>	<b>7.4</b>	<b>43.7</b>	<b>40.0</b>	<b>8.9</b>
Madhya Pradesh	1-3	360	4.2	30.6	51.9	13.3
	3-5	384	7.3	30.2	46.6	15.9
	<b>Pooled</b>	<b>744</b>	<b>5.8</b>	<b>30.4</b>	<b>49.2</b>	<b>14.7</b>
Orissa	1-3	367	6.8	36.2	47.7	9.3
	3-5	407	6.6	41.3	46.7	5.4
	<b>Pooled</b>	<b>774</b>	<b>6.7</b>	<b>38.9</b>	<b>47.2</b>	<b>7.2</b>
West Bengal	1-3	310	9.4	44.5	39.0	7.1
	3-5	350	5.7	41.7	46.3	6.3
	<b>Pooled</b>	<b>660</b>	<b>7.4</b>	<b>43.0</b>	<b>42.9</b>	<b>6.7</b>

Age (Years)	n	Nutrition Grades*			
		Normal	Mild	Moderate	Severe
1-3	3408	9.9	43.4	40.1	6.6
3-5	3238	8.0	43.4	42.5	6.1
<b>Pooled</b>	<b>6646</b>	<b>9.0</b>	<b>43.4</b>	<b>41.3</b>	<b>6.4</b>

\* : NCHS Standards

## Malnutrition Among Children Under Five Years Based on the WHO Child Growth Standards and the NCHS/WHO International Growth Reference



### Global Nutrition Scenario

**Acute malnutrition** – Recent and severe weight loss as a result of acute food shortage and/or illness. Measured by weight for height or MUAC

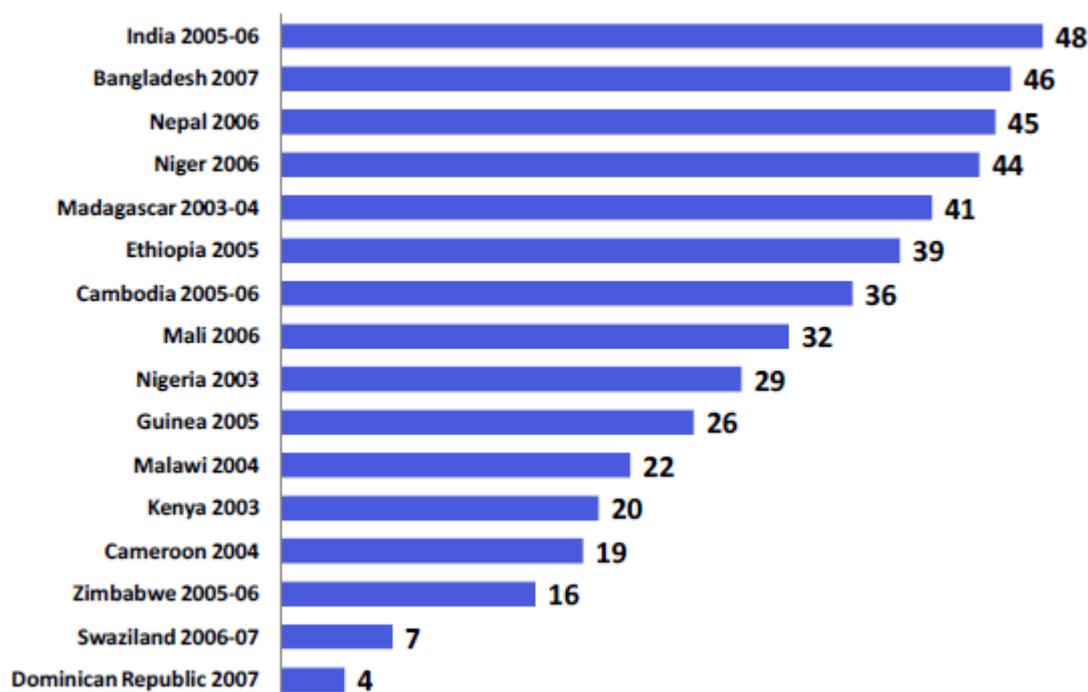
**Chronic malnutrition** – Inadequate diet persistently, over a longer period. Child is stunted (height for age) and/or underweight (weight for age)

**Global Acute Malnutrition (GAM):** Weight for height  $< -2SD$ , or weight for height  $< 80\%$  or MUAC  $< 125\text{mm}$

**Severe Acute Malnutrition (SAM):** Weight for height  $< -3SD$ , or weight for height  $< 70\%$ , or MUAC  $< 110\text{mm}$  and/or bilateral edema

### Under Nutrition among children under 5 years in selected countries

### Percent underweight, based on the NCHS/WHO Growth Reference



### Analysis of the worldwide burden of acute malnutrition

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	3 192	565 768	421 767	987 535
Middle East and north Africa	44 478	7	2	3 114	890	168 942	117 547	286 489
South Asia	166 566	15	2	24 985	3 331	1 644 950	440 201	2 085 151
East Asia and Pacific	159 454	4	-	6 378	-	484 528	-	484 528
Latin America and Caribbean	54 809	2	0	1 096	-	83 273	-	83 273
CEE-CIS and Baltic states	30 020	4	1	1 201	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	2 209	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.<sup>24</sup> 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).<sup>25</sup> †Severe mortality rate=132/1000/year (average of five studies, range 73–187 children with mid-upper-arm circumference <110 mm).<sup>26</sup>

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

Adapted from Collins *et al.* Lancet 2006 (42)

### Adult Weights and Heights

Table 12 presents the proportion of men and women with BMI below 18.5 (a standard cut-off conventionally associated with "chronic energy deficiency") in the nine NNMB states. The proportion of individuals with low BMI, like that of underweight children, declined steadily during the last 30 years or so. In spite of this, Indian adults today (like Indian children) have some of the highest levels of undernutrition in the world, with 36 per cent of adult women suffering from low BMI (rising to well over 40 per cent in several states). [fn 7 - International Institute for Population Sciences (2007), page 304. This is consistent with the NNMB-based figures presented in Table 12 for 9 states. The international figures are available at <http://www.measuredhs.com/aboutsurveys>.] Among 23 countries of sub-Saharan Africa for which comparable data are available from the Demographic and Health Surveys, only one (Eritrea) is doing worse than India in this respect (Table 13). In fact, the proportion of adult women with low BMI is above 20 per cent in only four of these 23 countries (Burkina Faso, Chad, Eritrea and Ethiopia), and the population-weighted average for all these countries together is 16 per cent, much less than half of the Indian figure.

**Table 12: Nutrition Status of Indian Adults, 1975-9 to 2004-5 (Body Mass Index)**

	Proportion (%) of adults with Body Mass Index below 18.5					% decline (1975-9 to 2004-5)
	1975-79	1988-90	1996-97	2000-01	2004-05	
Men	56	49	46	37	33	41
women	52	49	48	39	36	31

Sources: National Nutrition Monitoring Bureau (1999, 2002, 2006). These figures apply to the nine "NNMB states": Andhra Pradesh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu, West Bengal. Data for 1975-79 and 1988-90 exclude West Bengal; data for 1996-7 exclude Madhya Pradesh. See text for further discussion.

**Table 13: International BMI Data (Women Aged 15-49 Years)**

	Mean BMI	Proportion (%) of women with BMI < 18.5
<i>South Asia</i>		
India	20.5	35.6
Bangladesh	20.2	34.3
Nepal	20.6	24.4

### Sub-Saharan Africa

Eritrea	20.0	37.3
Ethiopia	20.2	26.5
Burkina Faso	20.9	20.8

Chad	20.8	20.3
Madagascar	20.8	19.2
Niger	21.4	19.2
Senegal	22.3	18.2
Nigeria	22.3	15.2
Zambia	21.6	15.0
Congo 2005	22.9	13.2
Guinea	21.8	13.2
Mauritania	24.3	13.0
Kenya	22.7	12.3
Uganda	22.2	12.1
Benin	22.4	10.7
Tanzania	22.3	10.4
Rwanda	21.8	9.8
Ghana	23.1	9.3
Malawi	22.0	9.2
Zimbabwe	23.1	9.2
Mozambique	22.1	8.6
Gabon	23.5	6.6
Lesotho	25.1	5.7
<i>Population-weighted average for sub-Saharan Africa (23 countries)</i>	21.9	15.8

Source: "Demographic and Health Surveys" (DHS) data available at [www.measuredhs.com](http://www.measuredhs.com). The reference years vary between 2000-1 and 2005-6. India's National Family Health Surveys (NFHS) are part of the DHS series.

## **EPIDEMICS AS MARKERS OF SOCIO-ECONOMIC INEQUALITIES**

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### **Introduction:**

In recent times India has acquired the status of an Asian giant in terms of sustained high economic growth and population size, second only to China. Although it has experienced high economic growth it fares poorly in terms of human development indicators and occupies the same status as low income countries (add reference and details). This gap between high economic growth and poor human development is reflection of a lack of policies that address the persisting income inequalities and poor social sector inputs. Poor human development indicators include high Infant Mortality Rate, Child Mortality and Maternal Mortality that are marked by regional and social inequalities. The major cause of mortality continues to be communicable diseases and during the last decade there have been a number of epidemics of these diseases across states, some which get reported while many go unreported resulting in deaths and suffering. These epidemics are not mere outbreak of infections but reflect socio-economic and health service inequalities that have been persisting and in some cases widened over the last two decades. Given this conceptualization one needs to expand the framework of analysis that goes beyond the biomedical framework and integrates the social production of disease itself. Here, Paul Farmer's perspective offers a window to analyse epidemics when he observes that: :

“ Critical perspectives on emerging infections must ask how large scale social forces come to have their effects on unequally positioned individuals in increasingly interconnected populations; a critical epistemology needs to ask what features of disease emergence are obscured by dominant analytical frameworks( Farmer:1999;p.5). Therefore in this paper we examine the relationship between inequality, poverty and epidemics since “poverty and other social inequalities come to alter disease distribution and sickness trajectories through innumerable and complicated mechanisms (Ibid;p.13).

## Poverty and Communicable Diseases in India

The last six decades of Indian independence has been marked by planned initiatives that have tried to address increasing economic growth, reducing poverty and tackling communicable disease. The state has played an important role and there have been modest improvements in terms of life expectancy at birth, Infant, child and maternal mortality rates. However communicable diseases continue to be the major cause of death with non-communicable diseases also rising fairly quickly. So, while India has emerged as one of the major economic player in the world, its human development indicators lag far behind that of China that is of considerable concern for academics, policy makers and activists. During the 1990's India embarked on major economic reforms with loans from the International Monetary Fund and the World Bank which marked the beginning of period of high growth rates. The high economic growth trajectory was marked by regional inequalities and human development indicators. An analysis of the UNDP state human development reports pointed to the inter-regional and intra-regional variations in terms of poverty levels, health and education indicators (Baru et al:2005). The analysis showed high levels of association between poverty and poor health indicators and also higher levels of morbidity and mortality due to communicable diseases. This pattern gets supported by the available data on recent outbreak of communicable disease epidemics from different parts of the country. We hypothesise that it is rising inequalities and relative poverty coupled with poor state of public services in the social sectors that are contributing to these epidemics. The Human Development Report has pointed to the global consequences of poverty within nations and argues that the consequences of poverty and backwardness in the Third World cannot be contained within country borders but will travel across countries in the form of disease, terrorism, drug trafficking, environmental degradation etc. Similarly even within countries, poverty and inequality will show their consequences through these various ways and in the case of disease it would "not be possible to secure immunity from germs that will respect no civil regulations or concrete walls"(Economic Times: October 29<sup>th</sup> 1994). This paper proposes to answer two questions. Firstly, are epidemics being treated as serious concerns by the media and governments? Secondly, when it is treated a serious issue how is it portrayed in the media and what is the nature of policy response in handling it. To answer these questions two epidemics –the plague epidemic in Gujarat and a gastro-enteritis epidemic in Andhra Pradesh are analysed. During 1994 the outbreak of plague in Gujarat received considerable global and media attention from both the political and financial papers. This was probably the first time in the recent history of India that the media focused on an epidemic which was seen as a blot on the good economic performance of the country. If one studies the newspaper reports in the financial papers they focused on issues concerning the negative image of the country and also raised questions regarding the co-existence of growing economic prosperity and consumerism with poor public infrastructure. Subsequently there have been other epidemics that have not received the kind of attention that the plague epidemic evoked.

We present the contrast in the manner in which the plague epidemic in Gujarat and a gastro-enteritis epidemic in Andhra Pradesh were differentially handled and the reasons for this. Following the presentation of the case studies an effort has been made to track the outbreak of communicable disease epidemics from 1998-2003 based on newspaper reports in major English dailies and the Hindi press. The diseases tracked include malaria, kala azar or leishmaniasis, gastro-enteritis and Japanese encephalitis in order to use these as markers that reflect growing regional and social disparities as well as the ineffectiveness of public health services to predict, respond and prevent deaths due to these episodes. It uses newspaper reports of epidemics as a source of evidence to map the type of disease outbreaks and their regional and social distribution across India. Since reliable official data on epidemics is limited, an innovative method of using newspaper reports of such epidemics in the English and Hindi newspapers was used to get insights into the distribution and handling of such situations. In addition, newspaper epidemiology was used as symbols of how epidemics are represented, their distribution and also the content of the reporting. These articles are often the only source of information for the general public as well as a warning for the health services that such an outbreak has occurred. These reports play an important role in representing and interpreting the epidemics in society. Therefore we would like to analyse the content of reportage in terms of whose viewpoint is represented; are these articles reporting before or after the state has responded or is it alerting the state for action; are these one time reports or are there instances of follow-up; do these articles inform or alarm the public.

## **Black Death and Gastro-enteritis Epidemic in Gujarat and Andhra Pradesh**

### *Pneumonic Plague in Surat, Gujarat*

The Plague epidemic that broke out in August 2004 in the Western part of India received global attention and for the first time both the general and financial papers covered it on their front pages and carried editorial comments. It was one of those rare situations where the coverage lasted for over a week<sup>1</sup>. This trend was observed in both National and International newspapers that covered the outbreak, the major exodus that followed, the reasons for the outbreak and its handling. The facts of the outbreak are as follows: In August 1994, a village in Maharashtra state experienced an outbreak of suspected bubonic plague, which after a week was followed by an outbreak of suspected pneumonic plague in Surat, Gujarat and claimed at least 41 deaths. Both Maharashtra and Gujarat are economically prosperous states and Surat is a business town that is famous for diamond cutting and polishing industries apart from textile manufacture and trade. The pneumonic plague is spread through contact and droplet infection and hence its spread cannot strictly be contained as in the case of bubonic plague. The media reported this outbreak and traced the daily migration of labour between Maharashtra and Gujarat as the cause for the spread of the disease to Surat. Once the cases started rising then there was panic in Surat

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<sup>1</sup> This is based on a survey of all major general and financial papers in India starting August 24<sup>th</sup> 2004 to September '04.

and the upper and middle classes started fleeing by air, road and rail to other areas since the disease was spreading fast and clearly did not have class boundaries. John Burns of the New York Times reported on the exodus of 200,000 people from Surat after the outbreak and said that “ medical experts described this as one of the most serious reported in the world in recent decades” At this stage the official deaths were reported to be 24 but the unofficial figure was much higher (New York Times: September 24, 2004). Majority of those who succumbed to the disease were workers who could not flee from Surat.

The outbreak conjured images of Black Death in the Middle Ages and Lawrence Altman described the pneumonic plague as “the deadliest and most easily communicable form of the bacterial disease that was known as the Black Death in the middle ages” (New York Times: September 24<sup>th</sup> 2004).<sup>2</sup> Burns in his report furthers this idea by commenting on the paradox of a fast growing economy using medieval methods to combat the rat which is the carrier of plague. “Bharat Jhadav leaned forward like a medieval swordsman, both knees bent, peering intently into the darkness along the line of his wooden stave. Standing perfectly still, he flicked his wrist sharply downward, bringing the heavy spiral of wire at the end of the stave into sharp contact with the ground. “Yes! I have got it” he cried. Nimble, he dropped down on one knee and a menacing looking rat, eight inches long, out of the concrete gully behind the Easy Wash laundry in Colaba Market in Mumbai.” In a sense this description captures the predicament of a fast growing economy without the necessary organized social services to deal with poor environmental conditions.

During this period the Indian papers were full of the exodus and also on how this epidemic had affected the economy in several ways. It was estimated that the plague epidemic cost India US 3 billion dollars due to loss in tourism industry and export of perishable and non perishable goods. It certainly affected the image of India as the fast growing economy that had embarked on reforms (Ramalingaswami:2001). The Indian papers started commenting on the urban degradation and squalor that was seen as responsible for the outbreak and also on the weak public health services in responding to the crisis and the exodus of the private practitioners from the scene of the epidemic when they were being sought after by the public. A columnist for the Economic Times captured the issues in a column entitled “Rats and Diamonds” and aptly captured the growing wealth on the one hand and a complete disdain for public responsibility on the other. The columnist states that: “Nothing symbolizes the paradox of economic development in India better than the imagery of private wealth and public squalor that Surat today represents.

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<sup>2</sup> Burns conjures the image of a medieval swordsman fighting the rats with a wooden stave. The article entitled “With Old Skill and New, India Battles the Plague” (September 29<sup>th</sup> 1994). The Jadhav’s are dalits whose traditional occupation was catching rats.

Ironically, on the same day that the news about the outbreak of plague hit the headlines, Professor Michael Porter, the distinguished management guru from Harvard Business School was celebrating the success of Surat's diamond exporters for being one of three important "competitive" players from India in the global market. The other two being garments and software exports." The columnist further argued that:"the tragedy in Surat is the product of wilful neglect of public health and social infrastructure across the country. What is worse, even in the most prosperous regions and cities, few have been willing to translate private affluence to public security.....It is not difficult to list scores of such examples of neglect of public space, by hygiene and sanitation in India's rapidly growing cities. To blame the government alone for this would be facile. The priorities of the governments reflect, to a large extent, the priorities of the most vocal and organized sections of society. Let's face it, public health has never been a major issue with the Indian elite. Crises like the tragedy in Surat are waiting to happen, and when they do they draw the total disjunction between private prosperity and public squalor that has come to characterize India's mad rush into consumerism" (Baru: 1994).

These sentiments were echoed by other papers and opinion pieces that called for improving urban environmental sanitation and health services to avoid such situations in future. As John Burns reported after the plague had waned: "As India gains confidence that the worst of its plague epidemic is over, the country is swept by a wave of anger and self reproach. In place of the panic that broke out as the plague swept across the country in the last two weeks, the mood has shifted in recent days toward demands for something lasting to attack levels of urban squalor that many Indians say are among the worst anywhere" (New York Times:October 8<sup>th</sup> 1994). There was also call for urgent action to improve health care. The reportage of the plague was carried in the European, Russian and Latin American newspapers. This global interest was clearly an indication of how the Indian economy was getting globally integrated and the plague outbreak resulted in a loss of investor confidence both nationally and globally. In London, the Global Depository Receipts crashed after BBC and CNN reported on the plague situation in India.

#### ***Gastro-enteritis Epidemic in Adilabad district, Andhra Pradesh***

As a contrast to the importance that the plague epidemic received, when the gastro-enteritis epidemic broke out in 1998 in Adilabad district of Andhra Pradesh it went unnoticed in the national press and was largely reported only in the local press. The number of deaths in the Gastro-enteritis epidemic was almost ten times the deaths due to plague but it did not seem to warrant any panic or concern as did the plague epidemic.

In May 1998 a gastro-enteritis epidemic broke out in Adilabad district that is located in the north western region of Andhra Pradesh and is inhabited mostly by tribals who are dependent on forest produce and on cultivation. Since the land and forest availability has reduced they are dependent on the availability of work in agriculture as hired labour. Given the seasonality of work availability they do not get employment throughout the year.

The summer months are lean periods for work and reports from civil liberty organizations clearly indicate that there was crisis in food security due to lack of livelihoods during this period. During the early phase of the epidemic people first went to the Primary Health Centres that were poorly staffed and did not have adequate drug supply. As a result they sought the services of the local private practitioners. They were given unnecessary medication and saline drips. Due to mismanagement by the private practitioners and the non-functional public services deaths started rising. The alarming rise in deaths was alerted by the local media and then the state was forced to act on an emergency footing to avert more deaths. The time lag between the media reports and the state government acting was almost a week, by which time atleast 400 lives were lost as per official reports. However, independent estimates by a civil society organisation put it around 1600-1800 deaths with approximately 16,000-18,000 persons who were affected by the disease(Rao:1998).

There are proximal and distal causes that are responsible for this outbreak. The proximal causes that are often cited include poor quality of water and sanitation; accessibility, availability and quality of public health services; poor quality of private practitioner services. Distal causes include the prolonged exposure to chronic hunger, lack of adequate food security and livelihoods of the tribal population and the fact that Adilabad is part of a poorer region within Andhra Pradesh (Baru &Sadhana: 2000; Rao:1998). The reports of the outbreak did not evoke editorial comments and the government response was rather weak nor was there an outcry from middle and upper middle classes.

The contrast in the reactions to these two major epidemics has to be explained in terms of the nature of the disease; the violence of the epidemic in terms of total mortality and morbidity; the geography and social incidence of the epidemic. We would argue that the in explaining the variations an interdisciplinary approach that takes into account the biology, socio-economic and political factors need to be addressed. There was a difference in the nature of transmission of the disease. The pneumonic plague was transmitted through droplet infection and could not be contained either physically or socially as a result it was a 'threat' to all classes and since the epidemic broke out in an urban centre the threat became even more real. This explains why there was pressure on the government to act on the plague epidemic as compared to the gastro-enteritis epidemic. One would agree with Slack when he observes that : "Most productive of all government responses seem to be epidemics with a definable local incidence but which nevertheless – being infectious – pose a perceived threat of breaking out of their bounds and striking at the elite ( Slack:1992; p.6)

In the case of the gastro-enteritis outbreak it was in a remote part of the state where there is little urbanization and the population is predominantly tribal. The nature of the disease and its transmission meant that it could be confined to a small area and it did not prove to be a threat to the urban population and certainly not to the middle classes. Hence there was no sense of panic or outrage regarding the epidemic.. In addition the poor water supply that was held as responsible for the outbreak was once again confined to the villages where the outbreak occurred and was not a threat to any other region or group.

In the case of the plague outbreak there was an exodus of people across classes by various modes of transport to other cities and towns in India. This resulted in a situation where the disease was no longer confined to the city in which it originally broke out. This created fear across the country and since December is a peak tourist season, this epidemic put fear into foreigners who were planning to visit India, resulting in a major setback to the tourist industry due to cancellation of visitors. It was not merely the tourist industry but also the export of food and other items that were immediately banned by foreign countries that only added to the economic losses. It is for these set of reasons that there was a marked difference in responses of the state, public services and the media to these two epidemics.

### **Patterning of Epidemics in Recent Years**

Apart from these two epidemics there have been several outbreaks resulting in deaths but have gone mostly unnoticed. In the following section we present data on outbreaks due to vector and water borne diseases from mid 1990s to early 2000s based on a scanning of reports of major English and Hindi newspapers. The vector borne diseases include malaria, kala azar or leishmaniasis, Japanese encephalitis and the water borne includes gastro-enteritis. An analysis of the reports for all these diseases shows that there is a clear regionalization of these epidemics- Kala Azar is mainly endemic in Bihar; Malaria in the North East, north-eastern districts of Andhra Pradesh, Madhya Pradesh, Rajasthan and Orissa; Japanese Encephalitis in selected districts of Andhra Pradesh and eastern Uttar Pradesh; gastro-enteritis epidemics are found to occur across most states with the poorer states registering more reported cases and Leptospirosis which is endemic in Kerala and coastal Maharashtra. This kind of a pattern vividly demonstrates the association between poor socio-economic development and the outbreaks.

Although the media itself does not play a sustained role in reporting and follow up of epidemics, it has been performing the role of alerting authorities that prompts some action from state authorities. An analysis of the reports reveals that the focus is on the number of deaths and the delayed response of health services in dealing with the epidemic. Reporting on an epidemic of Falciparum malaria in Assam which is in the North-East region of India, the correspondent for the National Herald writes: "Atleast 60 persons have been killed and over 5,000 are suffering as a malaria epidemic is sweeping through several parts of the state for over a month.

Official sources put the toll at 50 and about 4,500 were taken ill. The health minister said that the affected areas were mostly located in the western and eastern borders of Assam (National Herald Tribune, New Delhi; 30<sup>th</sup> May 2001). The Statesman from Calcutta reported of deaths due to Falciparum malaria in North Bengal<sup>3</sup> and state that :” Nearly 2000 people are being treated in different district hospitals for malignant malaria. There have been ten deaths, of which five are from the tea garden areas of Dooare. The tea gardens have accused the Block Health Department for delay in spraying DDT. The District Magistrate accused the tea gardens of not having qualified doctors and that the health infrastructure is far from satisfactory (Statesman, Calcutta, 29<sup>th</sup> June 2001). In Assam several deaths were reported due to falciparum malaria across districts. It was estimated that 111 persons had died in 1999, 122 in 2000 and according to a newspaper report in May 2002, 51 persons had died over a period of a month. The health minister told the correspondent that “mosquitoes appear to have become resistant to the commonly used anti-malarial drug, Choloroquine, while another another drug called Primaquine has better response (The Sentinel, Gauhati, 24<sup>th</sup> May 2002).

In the case of Kala Azar, the outbreaks have been mostly in Bihar and within it the poorer districts where the levels of poverty are high and social service infrastructure very weak. The Telegraph from Calcutta reported on an outbreak of Kala Azar in Bihar in July 2001 and stated that: “Atleast 25 people died in the sudden outbreak of Kala Azar. The worst affected districts are Sitamarhi, Motihari and Madhubhani in the North and Patna district in and Central Bihar”(Telegraph:Calcutta; 11<sup>th</sup> July 2001). Another report on deaths due to Kala Azar states that: “Atleast eight persons have died of kala azar and 400 persons are reported to be undergoing treatment for it in North Bihar. It is now reported to have spread to 800 villages in the district” It analyses the reasons for the outbreak as due to the indifferent attitude of authorities as a result of which spraying with DDT was not carried out during the previous year. Resource crunch was cited as the reason for carrying out restricted spraying in selected villages where reported cases or deaths were high. (Hindustan Times, Patna; 12<sup>th</sup> July 2001). In 2002 there were several epidemics of kala azar. A report in the Tribune states that: “20 deaths were reported from East Champaran and adjoining districts in North Bihar” Once again the lack of responsiveness of state health services in terms of non availability of drugs and patients charging doctors and health officials withholding the injections that have been allotted for distribution to health centres and diverting them to their private clinics for treatment (The Tribune: New Delhi; 9<sup>th</sup> April 2002).

This is observed in the case of Japanese Encephalitis as well where it is largely endemic in Eastern Uttar Pradesh which is once again the less prosperous region within the state that is once again characterized by high levels of

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<sup>3</sup> North Bengal is the poorer region of West Bengal where most of the tea estates are found. In tea estates the conditions of workers are extremely poor and hence higher levels of morbidity and mortality. These are far flung areas where access to health services is also poor. Raisily's unpublished doctoral dissertation entitled “ examines this aspect in some detail.

poverty and poor quality of health services. A report of deaths due to Japanese Encephalitis states that: "over 100 people have died of encephalitis in the eastern and Terai districts of Uttar Pradesh." Here again the report points out the casual attitude of the government and the health staff say that they do not have spraying machines and never prepared to deal with a situation that occurs annually (Statesman, New Delhi: 2<sup>nd</sup> September 2001). Japanese encephalitis affected Assam in 2002 and according to a report the epidemic had claimed more than 86 lives within a month. The principal of the Assam Medical college said that 80 people had died of the disease over a month and most of the victims were children. Since no specific drugs are available for its treatment it makes the situation very threatening. Most of the interventions have to be preventive in nature but the health services do not seem to be acting in time (Pioneer, Lucknow: 2<sup>nd</sup> August 2002). Deaths due to these various outbreaks is clearly a reflection of the poor quality of health services delivery at the primary level since the lack of personnel, drug supply and basic infrastructure reduces effectiveness of these services. According to a report on the cause for the large number of deaths due to falciparum malaria in Assam: "the absence of medical doctors and health workers in the remote areas was a major reason for the high death rate. Medical specialists and paramedics usually do not prefer postings in the malaria endemic zones." (National Herald, New Delhi, May 2001).

Clearly the lack of infrastructure, human resources and drug supplies and poor administration are important reasons for not managing epidemic situations. For all vector and water borne diseases there is a need for inter sectoral co-ordination between different departments like agriculture, forests, water supply, education and public health in order to predict, treat and prevent epidemics.

#### *Class background of persons dying in epidemics*

There is scanty information on the social background of those dying in these epidemics in the newspapers. Based on available reports and investigative reports of the National Institute of Communicable Diseases show that majority of those who die in the epidemics are women, children and the elderly (Verghese & Sharma: 1995). There are also reports of how labourers working in stone quarrying are highly prone to malaria since the environmental conditions created by the quarrying process leads to water stagnation that is conducive for the breeding of mosquitoes. Since these workers are hired on a contract basis they are not provided with any health cover hence the high death rates among them during epidemics. In the case of Kala Azar or Leishmaniasis which is endemic to Bihar, majority of the victims of the epidemic belong to the lowest in the caste hierarchy and are essentially rat catchers and landless labourers. Their caste based occupation exposes them to additional risk to contract this disease.<sup>4</sup> As a contrast, in the case of viral fever epidemics the social background of patients tends to be mixed because of the very nature of transmission and is not strictly restricted to the working classes. In cases of viral fevers the morbidity may be high but mortality is low.

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<sup>4</sup> This is based on an analysis of various newspaper reports that have covered the social background of the victims.

An important issue that arises out of the epidemics is the issue of why the government is unable to predict and be prepared for handling the likely outbreak. This is a reflection of the weakness in the public system and lack of a well functioning surveillance mechanism. As one senior official observed:

“Lack of a comprehensive surveillance system is responsible for both the emergence and re-emergence of infectious diseases. By the time the outbreak is recognized, it is too late. There is also the problem of delay in reporting cases identified at the primary level to the state machinery by which time the problem gets out of hand.” (The Assam Tribune:26<sup>th</sup> June 2002)

This is amply demonstrated when epidemics have a seasonal pattern but yet the government does not seem to be prepared to avert and handle such situations. Thus most of the time a ‘fire fighting’ approach is taken to epidemics and the objective is to prevent deaths in order to avoid media attention. While the proximate determinants for the epidemics include weak public health service infrastructure and related issues that are elaborated above are well recognised, the distal determinants that are related to increasing regional and social inequalities that are related to the patterns of growth and development being pursued. In this context there is a need to promote inclusive growth where redistributive justice is a core and the need to revitalize the sagging public health services that is absolutely essential to predict and respond to the vector and water borne diseases that are affecting the population. In addition structural and material realities of deprivation also need to be factored so that there can be a more integrated approach to averting and dealing with epidemics in future.

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## ISSUES FOR DEBATE

# Health and Nutrition: People, Policies and Politics

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An intensive debate occurred on issues relating to poverty, nutrition and health in the seventies and early eighties declining soon thereafter (Dandekar,<sup>1</sup> Sukhatme,<sup>2</sup> Gopalan,<sup>3</sup>). Prof. Sukhatme and the Edmundsons presented one side of the debate in a more developed and sophisticated form in their book, *Diet, Disease and Development*.<sup>4</sup> 63

Today, when 'poverty' is being sought to be erased from national planning and health policy, this book is an important document for public debate regarding evolving public health and development perspectives suited to the specific context of India and other developing countries. The authors' articulation of their perspective allows it to be interpreted as anti-poor and to be used by anti-poor social forces. It is important to reopen the debate and deal with recent as well as earlier issues.

### ***The Context of Contemporary Public Health Perspectives***

The latest document largely setting the current trend in health planning is the World Bank's *World Development Report: Investing in Health*.<sup>5</sup> It looks at health planning entirely from the point of view

of finance and the role of financial structures in changing or ascertaining certain kinds of human behaviour. Presenting a plan for a techno-centric, modern, expert-based, marketized health service system with extreme commodification of health, it appears as the most practical in the given socio-political and economic context because it is entirely in tune with the centralized organisational structures, the current economic structural changes and the elite, urban oriented development model. The book authored by Sukhatme and the two Edmundsons tends, in large part, to provide 'scientific' support to this approach and is, therefore, important to read and analyse. But that is not all one should read into it. Contradictions within its perspective offer ideas for other creative possibilities as well.

At the other end of the ideological spectrum from the World Bank, we have the perspective articulated by the Bhore Committee (GOI, 1946)<sup>6</sup> and followed up by others attempting to adapt it in the light of practical experience and changing conditions. One major drawback of the Bhore Committee was that it assumed sufficiency of resources and permitted itself the luxury of looking at every aspect of health services without emphasizing the need to prioritize (Qadeer and Priya 1992).<sup>7</sup> The suggestions for a complete public sector medical care system such as Britain's National Health Service too would require unrealistic economic resource inputs from the state. This book, on the other hand, gives primary consideration to the problem of resources in the implementation of public health programmes and insists on low resource input options. In fact, it may be faulted for its over-balancing on the other side; cutting on absolute basics on the plea of resource constraints. Later work (ICSSR-ICMR 1982,<sup>8</sup> Antia 1993<sup>9</sup>) argues for a public health policy based on encouragement to people's action, use of indigenous systems of knowledge, panchayati raj as an instrument of wielding people's control over development efforts and services and an efficient, well-funded public sector. While success stories of this approach are available largely through NGO efforts in small pockets, this perspective seems to be somehow unable to come to grips with the existing socio-political situation. It does not indicate the process by which societal conditions, very adverse to implementation of the model presented, are to be turned in a more conducive direction.

Between these two extreme models lie others which propose a mix of the two. For instance, there is the suggestion of identifying a package of services through an epidemiological approach including the concept of community felt need, people's health related perception and behaviour, the decentralisation of services and due attention to the high degree of disparities in the socio-economic structure of developing societies (Banerji 1993).<sup>10</sup> This perspective acknowledges the primacy of the political process in development planning. It recognizes that implementation of a holistic approach is dependent on processes which manage to break the socio-political constraints on it. Meanwhile, it sees the developing of appropriate principles and methods of health planning and then making them widely understood and accepted as the primary tasks before public health scholars. The planning of the National Tuberculosis Programme (NTP) is offered as an example of appropriate planning.<sup>11</sup> That the NTP has not succeeded in practice shows how isolated appropriate efforts cannot work unless the overall health service system is conducive to it.

This book presents another 'in-between' perspective. Its limitation is that it attempts to address the issues of 'culture' without addressing the issues of social structure. Combining the two would be a potent mixture for change towards a more healthy society. Focussing exclusively on any one is a travesty of the human reality. An exclusive reliance on the former is likely to support the status quo in an extremely unhealthy society.

### **The Book**

This book brings together the ideas developed by Professor Sukhatme over thirty-seven years (twenty-seven as Director of Statistics, FAO, Rome and then, since 1981, as President, Maharashtra Association for the Advancement of Science, Pune) as also by his disciples Wade C. Edmundson (also a statistician) and Stella A. Edmundson (a nutritionist). Their understanding of several public health problems is put together to present a perspective on how both health and development can be effectively promoted in developing countries. In the process it makes one reflect upon the economics of health and the relationship between science, policy, politics and social trends.

The authors' general perspective emphasizes health as a dynamic process, a resultant of the interplay between mind and body, and of

the internal milieu with the external environment. In their view, an understanding of the ecology of health must inform all health planning with due consideration of the interaction between different components of the external environment - the physical, the biological, the economic and the cultural - which sets the boundaries within which the internal environment adjusts to maintain stability and normal function. Therefore, health and economic development must be examined together in all their complexity.

The principles underlying their policy guidelines emphasise the importance of human resource development (basically education and health) as the primary focus of developmental activity by governments of developing countries. Economic growth alone is not enough to improve health. "Human resource development is the key causal priority motivating economic growth" (p. 8).

Secondly, improving health in the developing world is a matter of setting priorities, particularly given the low health budgets. The authors advocate the use of the cost-benefit approach for determining intervention priorities.

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Thirdly "give what the people want" (p. 29) is offered as the starting point for any health improvement programme: easy-to-do cures for their ailments; health workers treating them with courtesy, patience and regard; giving people advice but allowing them the right not to carry it out.

Analysing the health situation in developing countries, with the specific cases of India and Indonesia, the authors spell out the well accepted scenario that malnutrition and infectious diseases are the major sources of ill-health in developing countries, that children under five are the most affected age group, and, that there is more ill-health in rural rather than in urban areas.

The authors accept that dietary inadequacies and infectious disease are strongly synergistic, one compounding the problems created by the other, but see *disease as a more important component of health than diet*. Three scientific arguments are presented in support of this contention. The direct scientific basis for this statement comes from a statistical analysis of the factors leading to increase in life expectancy in Japan from 1949 to 1963. This contention is further

supported by their old statistical argument (part of the well-known public debate between Professors Sukhatme and V.M. Dandekar in the early 1980s) that people adapt to low energy intakes with little functional loss and therefore the quality of food intake is not a major problem. Here the authors also invoke the synergism between disease and nutritional status to hypothesise that the low manifestation of quantitative food deficiency is due to the disease load and its siphoning off of the adequate dietary intake. This line of argument is pushed further by a discussion of protein vitamin-A and iron deficiency, and goiter; that the primary responsibility for the existing forms of malnutrition lies in the quality of diets. Thus, as a corrective, what is needed are either changes in eating habits, or specific nutrient additives.

The book also contains a detailed discussion on the microbiological and pharmacological aspects of the major infectious diseases - diarrhoea and dysentery, pneumonia, malaria, helminthic 'infections'. There is, however, little consideration of their ecological correlates.

Following this analysis, the authors make some concrete recommendations for health policy and programmes:

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1. *Direct action against disease needs to be given priority over action against malnutrition.*
2. Common diseases should be tackled largely through self-care by lay persons with basic medical services handled by primary health workers. Education of villagers in relevant modern scientific knowledge, use of indigenous medical practitioners and folk knowledge is recommended.
3. The importance of curative care is underlined even as a part of public health programmes aiming at prevention. This is what people want most. In the authors' view, after it is provided, people will start seeing the purpose of preventive measures.
4. Public health measures such as provision of safe water and latrines, environmental sanitation, etc. though desirable, "are costly and difficult, specially in the villages. *Simple behavioural change in the individual without extensive government intervention*" (p.150) is emphasized as the feasible method of prevention of disease. At the same time, the authors see the government programme for immunisation of children against the

six vaccine preventable diseases as an important intervention. Involving people in the Universal Immunisation Programme and using knowledge of local customs and beliefs to make it acceptable is stated to be crucial for its successful implementation.

5. The authors categorically reject supplementary feeding programmes as an answer to the problem of malnutrition in children. Quality of diets should be improved through educating people in using locally available foods, fortification in marketed products and specific supplements to be given by the medical system. These measures plus the control of diseases which compound the effect of dietary deficiencies, are the preferred means of improving nutritional status.
6. Besides behavioural changes being brought about through health education by primary health care workers, *a more appropriate primary school syllabus is recommended as the starting point for improving rural people's culture and lifestyle to decrease morbidity and increase economic productivity.*

68 In addition to the three "Rs" the appropriate curriculum is meant to equip the child with an understanding of his/her surroundings via focusing on relevant health, agricultural and social issues using a mix of traditional and modern knowledge sources and technologies.

### ***The Perspective: Its Significance and Limitations***

The principles set out in this book for public health theory, policy making and practice are important contributions to the current debate in public health. However, it does appear that the authors miss out some elements crucial to the wholesome application of those very principles when they analyse the health situation and when they draw out guidelines for public health policy. These are discussed below, since ignoring them would undermine the power of the conceptual principles offered by the authors.

#### ***Principle 1***

One of the primary principles enunciated in the book is *being holistic and ecological with sensitivity to complexity and diversity*. The authors themselves go well beyond the cliched use of phrases like 'inter-sectoral coordination', 'inter-disciplinarity' and 'environment friendliness.' In their words: "There is a tendency for economic and technologic theory to be too simplistic... The real world where human

beings interact with their environment is a complex place with room only for a holistic social and technological approach (p. vii)."

The authors remind us of the power of the individual human being, an element often missing in the epidemiologically generated, large numbers-based public health approaches. The introduction of this conceptual element can well make public health more effective in understanding human reality and in dealing with it.

Similarly, they highlight the situational specificity of health and disease in different human populations. They emphasize the role of the physical, biological, economic, and cultural environment in causing health and disease. This understanding is widely shared today. On the other hand, the conceptual significance of adaptation by human groups to their ecological setting is still to be fully appreciated, though it has been discussed by other scholars (Dubos 1968,<sup>12</sup> Banerji 1988<sup>13</sup>).

This perspective also provides a counter to the 'universal', 'neutral' view of medicine and public health. The belief that 'West is best' is questioned by this ecological view of health.

The authors' work demonstrates how problems of different locations may not only need different solutions, but that they also need to be defined differently. As some earlier studies in the early seventies had highlighted, protein deficiency in India needed to be interpreted differently from how it had to be seen in children in the African context, given the differences in dietary patterns (Sukhatme, 1972).<sup>14</sup> The malnutrition in African children primarily demonstrated protein deficiency, because of the reliance on carbohydrate-rich cassava-based weaning diets with almost no proteins. In India, the cereal and pulses-based diets carry the correct proportion of carbohydrates and proteins, and thus, malnutrition is a reflection of the inadequacy of quantity.

#### ***Fallacy 1***

In dealing with such inter-country, inter-regional differences, the authors neglect internal disparities (other than gender) within the population of a geographical region. They constantly refer to poverty, but largely only to show how it is not a barrier to better health, except in very extreme situations. They suggest that lack of

education is the prime reason for the poor being unable to raise their standard of living. The specificity of the economic and social environment of the poor and thereby the difference in the meaning of physical and cultural adaptation as compared to the better off in the same society is totally ignored.

#### **Principle 2**

Another important principle presented in the book is the necessity of giving importance and respect to the perceptions of rural peoples of the developing countries. Their need for curative care as the primary service of any health system, their desire to be treated with respect and dignity, the recognition that they are not just helpless beings in the hands of power-wielders but have their own means of dealing with problems are important insights for the planning and implementation of a public health service.

#### **Fallacy 2**

Yet, when it comes to the underfed and chronically malnourished, the authors say that only "a very small proportion of these are actually 'starving to death'. They are suffering from 'psychic hunger' and malnutrition, but not from physiologic 'starvation'" (p. 74). This means that most of those who feel that they are not being able to fill their stomachs adequately and want more food must not be 'given what they want' because they are not "physiologically starving" nor are they economically more productive when they eat more!

#### **Principle 3**

The authors take great care to emphasize human resource development (HRD). They argue against the macro-economistic model of development which suggests that economic growth and industrial development automatically bring social development. They also speak of a spiritually higher form of human beings who "can mould their minds as well as their bodies" in a healthy manner, whose "egoism is tempered with the knowledge that self interest is often well served by group interest", "need, not greed" forming the basis of community action, etc.

#### **Fallacy 3**

However, the rationale they offer for HRD is an entirely economic one: that HRD will stimulate economic development. This is a constant refrain throughout the book. The link between better health

and development is seen primarily in terms of increase in economic productivity. HRD for human well-being finds no mention at all. The perspective on adaptation to low intakes and their dismissal of 'hunger' as an issue (only starving to death or loss of economic work output being of real consequence) is consistent with this approach to HRD.

The societal goal is thus to be an increase in national economic productivity, even HRD being geared towards that goal. The hungry must learn to adapt better to their hunger and primarily develop culturally and spiritually not economically! Not once is there a mention of how the better off of the world are to develop culturally and spiritually; how their lifestyles must change to improve their own health and that of the poor. This expectation of dichotomised social values in the present world (with an upsurge of egalitarian democratic aspirations at all levels of society) is *a major flaw in the practical feasibility of the process the authors suggest* for better health and development. *There has to be a consistency between socially articulated values and the values one wants to see inculcated in individuals.*

#### **Principle 4**

Shaping of values, attitudes and behaviour is an important aspect of social policy. In this regard, the authors progress beyond mere 'health education' to the overall educational system. Formal educational channels are proposed as the basis for changing people's knowledge levels and behaviour so as to promote self-care and community action and inculcate an ecological perspective.

#### **Fallacy 4**

One may grant that education which helps people deal more effectively with their environment is an important intervention for the deprived groups to improve their material conditions and health. But it is not enough. For it to happen at all requires that the educators and the better-off sections allow the deprived groups the space to gain self-confidence and support them in the expression of their full potential. What process the authors envisage to build such a social environment is not clear. *The entire tenor of the argument detracts from any humanistic trend if not provide the basis for its opposite, i.e., anti-poor tendencies.*

### **Fallacy 5**

Similarly, the advocacy of prioritizing of interventions by the cost-benefit approach also demonstrates the contradictions in the authors' application of the stated principles. This method evaluates individual interventions for their economic cost and for the benefits they provide in terms of the cure of specific health problems. *This limits one to specific interventions without examining their interlinkages.* It does not take social costs or benefits into account.

The access of all citizens to all basic needs warrants little prioritizing but that is what the authors do. *How can one prioritize between 'satisfying people's hunger' and 'cure of illness' specially if one is to "give people what they want"?* We must, of course, examine various optional ways of meeting each of these basic needs and find out the optimal one within the given economic, social, cultural and organisational constraints. There we can use the cost-benefit analysis as one of the many tools which will help identify the optimal method of intervention.

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In fact, their very methodology in field studies and data analyses is indicative of their perspective towards development. Take, for instance, the indices used by them. The use of mortality and life expectancy rather than incidence and prevalence of disease or the gaining of physical stature as the measures of health status is one example. The use of economic activity alone for measuring work output as against economic activity plus domestic and social activities is another. We will discuss these at greater length in the next section. Here it is sufficient to appreciate that consideration of the quality of life is missing from the indices which form the bases of the authors' scientific arguments.

### **Fallacy 6**

The interventions highlighted as solutions to each of the health problems discussed in the book do not deal with any problem in a manner that links it to other health problems or to its basic social and environmental causes. Another aspect which finds no place in the author's perspective is the role of developmental interventions in shaping of societal concepts and values around health.

Consider the Universal Immunisation Programme. Compared to immunisation as the prime measure for decreasing morbidity and

mortality from the six vaccine preventable diseases, other general measures would minimise a whole range of diseases - these six as well several more common ones which are responsible for a greater quantum of childhood morbidity and mortality. For instance, safe water supply and excreta disposal would not only deal with poliomyelitis but also control the larger problems of diarrhoea and dysentery, typhoid etc. Similarly, improving the nutritional status of children will minimise the complications and mortality secondary to measles as well as to the more common diarrhoea, dysentery, pneumonia, tuberculosis and other respiratory diseases. The general measures would improve other aspects of human lives as well and increase well-being in general. In addition, they would provide concrete shape to an ecological perspective. Immunisation promotes the view that freedom from disease can be bought or acquired through an injection while the general measures convey messages of a hygienic lifestyle, environmental sanitation, etc. as important for health.

The authors put the latter at low priority because they see them as costly and difficult to implement. However, if locally appropriate technologies are used, if the community is convinced of their usefulness and actively involved, such measures may not be too difficult to implement. Professor Sukhatme's own project in eight villages near Pune seems to testify to this (p. 254-55). As for the cost, it too will not be high as these appropriate technologies are generally cheaper and more so if all the benefits of these measures are counted. Nor is mass immunisation as cheap and easy to implement as is often made out to be. Maintenance of an effective cold chain, administration of vaccines in the right manner and adequate coverage are difficult things to ensure under our conditions. The National Evaluation of the UIP (NIHFW, 1989)<sup>15</sup> clearly shows the failure in implementation even within the 'intensive programme' districts which got special resources and devoted extra attention to UIP.

The technocentric, commodified nature of interventions selected as priorities by the authors will convey messages contrary to what is expected from the 'appropriate curriculum' for primary education. It is likely that the concrete expression of health interventions will have greater impact than any formal education. In addition, when the overall developmental process is moving towards a more

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homogenising, consumerist culture, the creative use of local genius and knowledge is likely to be weakened further by the proposed interventions.

### **Science and Policy**

The relationship between science, policy and socio-political perspective seems to explain the nature of discrepancies between the conceptual principles stated by the authors and their work. The methodology and analysis used in their scientific studies produce results which support certain kinds of policy objectives and go counter to other perspectives. Let me take up specific examples to examine these links.

#### **Protein Deficiency: Then and Now**

74 Prof. Sukhatme had earlier made significant interventions in health policy debates. In the early seventies, international agencies were harping on protein deficiency and its serious implications for developing countries in terms of physical and mental retardation of large proportions of their populations. Influenced by the newly marketed technologies for producing high protein foods, they advocated special fortification of foods, promotion of high protein foods, etc. At that time, Prof. Sukhatme highlighted data from India which showed that the common diets of cereals and pulses provided adequate proteins if eaten in quantities sufficient to fulfil calorie requirements. The deficiency was primarily of calories due to under-feeding. He demonstrated statistically how this led to utilisation of proteins for conversion into calories rather than body building and therefore a secondary deficiency of protein (Sukhatme, 1972).<sup>13</sup> Alongwith the work of scientists such as Gopalan and his colleagues at the National Institute of Nutrition, this helped to effectively stem the 'protein gap' hysteria.

In this book, the authors take a slightly different position on protein deficiency, arguing that, "All things being equal, qualitative protein deficiency is more likely to occur than quantitative energy deficiency. However, quantitative energy deficiency may cause qualitative protein deficiency" (p. 37). While this statement presents the physiological picture, it does not take the cultural and social reality into account. In fact, read together with their contention that "In the future more emphasis needs to be placed on the quality of the

diet and less on the quantity of food intake" (p. 75), it leads to a complete reversal of Prof. Sukhatme's earlier contribution to the understanding of nutritional problems and to nutrition policy of the seventies! From earlier demonstrating how quantitative energy deficiency does in reality lead to protein deficiency in a majority of the malnourished (Sukhatme 1972),<sup>13</sup> they now state that this *may* happen (as in the quote above). Can this change in position be accounted for, at least in part, by the change in policy issues they choose to address at the two points of time? Earlier the question was whether to give primacy to protein deficiency or to calorie deficiency. Today the question being posed is of giving primacy to disease control or to increasing nutritional intakes of the undernourished.

#### **Variability and Energy Requirements**

Sukhatme's second major contribution has been in highlighting the variability in calorie requirements between individuals with similar weights engaging in similar amounts of physical work as also within the same individual from day to day. His data analysis shows that while intakes of large numbers average out in similar ways, an individual's energy balance may not be negative even if intakes are below the mean or the Recommended Dietary Allowance (RDA) for calories (Sukhatme, 1981).<sup>2</sup> This was a significant point to be made at a time when RDAs had come to be used by medical persons, nutritionists and dietitians as sacred numbers in assessing and deciding each individual's diet. This is patently a misinterpretation and misuse of statistical averages whose purpose is to facilitate comparison across groups of a large number of individuals. Sukhatme's argument would have served the cause of nutrition science and its praxis greatly had this point been taken up adequately. However, it seems to have got lost as the use of RDAs largely continues as before.

Sukhatme then went on to propose that instead of the mean, two standard deviations below the mean of intakes in the group be taken as the cut-off point while labelling diets as adequate or inadequate in terms of proteins or calories. This needs to be examined further.

If the physiological nutrient requirements of individuals with a certain body weight, age and activity level in a population follow a

normal Gaussian curve, the natural RDA of 50% of the individuals in a population will fall below the mean ('m'), of 16.5% below mean minus standard deviation ('m-s') and of 0.25% below 'm-2s'. Thus, individuals even below m-2s may be getting their full physiological requirement because persons of any population may actually need only those few calories. However, dietary intakes are dependent not just on physiological need but also on the cultural pattern and psychological state of the individual, on the one hand, and the access to food items both in terms of the types of foodstuffs and their quantity, on the other. Individual physiological nutrient requirements are difficult to establish as a result of these three, what statistically are conventionally called, 'confounding variables' and because of natural variability. Epidemiological measures such as RDAs are available but only for purposes of assessing and planning for large populations. Modern nutrition science should take the logic of Sukhatme's argument seriously. The ICMR Expert Group on RDAs did dwell on the question of variability while resetting RDAs (ICMR 1992).<sup>15</sup> However, the scientific argument needs to be taken further. Nutrition science needs to incorporate within its body of knowledge the nature of variations in nutrient needs and in dietary patterns meant to meet those needs.

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The understanding of variability offers possibilities of advancing the horizons of science by relating it to the complexity of diversity in physiological, ecological and social contexts. However, Sukhatme's own recommendation of using 'm-2s' for setting dietary requirements only lowers the RDA to another arbitrary numerical point; it does not make the conceptual shift his own perspective demands.

The reason given for this shift of cut-off point from 'm' to 'm-2s' was that use of the former puts too many people in the under-nourished category even when many of them are not adversely affected by their low intake. For some, this may be their natural requirement (as expected of persons at the margins of any random distribution curve) while others adapt to the low intakes as an 'auto-regulatory process' and without any functional loss. Attempting to raise their calorie intakes would be a waste of public effort and resources. *The basis of his policy proposal was cutting down the waste of resources.*

Those disagreeing with his proposition of 'adaptation to low intakes as a healthy process' based their argument on two issues. One was that low intakes lowered economic work output thus also perpetuating poverty (Dandekar 1982, Gopalan 1983). Secondly, that individuals who have 'adapted' to a poverty situation are the end result of a process which involves deterioration of physiological functions and high levels of morbidity in early life. Many succumbed to this morbidity and are martyred on the way to 'adaptation', while others who survive become physically stunted. Acceptance of stunting as 'healthy adaptation' is only legitimization of a process involving high costs to the community and the individual (Gopalan 1986).<sup>16</sup>

For the past couple of decades, Sukhatme and the Edmundsons have been studying the two relationships challenging the normal adaptation hypothesis - the relationship between calorie intake and work output and the relationship between nutrition and morbidity-mortality levels.

In terms of work output they find that economic work output is not significantly different between those with different calorie intakes. The work by the Edmundsons among the villagers of Indonesia and India has shown that *people adapt to low energy intakes by (i) a slowing of growth and resultant reduction in body mass leading to less food energy utilisation for a given amount of physical work, (ii) greater metabolic efficiency in energy use, more by decrease in basal metabolic rate but also by some decrease in energy used for work, and, (iii) decrease in time and energy spent on leisure activity (resting, social and religious activity)*. Thus persons with low energy intakes can perform more economically productive work per unit of food energy consumed.

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This may well be considered good adaptation from the economic policy makers point of view. However, economic work output is hardly a direct measure of physiological work capacity, because it is modified significantly by other economic and social factors such as possibilities within the occupation to increase output, the incentives and motivations for harder work inputs, etc. A study by the National Institute of Nutrition eliminated these factors and showed that those with higher weights and heights at age five, and in adulthood at the time of measuring work output, had significantly greater work output.

as compared to their counterparts with lower weights and heights, if habitual physical work done by them was the same. Habituation to greater physical work improved performance giving an illusion of healthy adaptation. However, a physiological parameter of adaptation for physical work, the increase in heart rate with increasing work, showed the latter group to be poorly adapted, i.e., the same intensive work put greater stress on the body of the village boys with lower weights and heights than with higher body measurements (Satyanarayana et al, 1979).<sup>17</sup> The lower work output of those with lesser physical growth and the evidence of greater stress on them indicates a lower level of physiological adaptation in the malnourished.

These findings differ significantly from those of Sukhatme and the Edmundsons. Satyanarayana et al have extricated the natural processes from their social overlay by taking the latter into account methodologically. Sukhatme and the Edmundsons examine the phenomenon from the point of view of a socially set goal, that of maximum physical activity for economic output by human beings who avail of the least possible resources. We must clearly distinguish between the description of phenomena from these two points of view when using such information for policy formation, specially since there may not be universal agreement on the definition of social goals.

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#### ***Disease vs. Diet***

The second argument against the acceptance of healthy 'adaptation' to chronic undernutrition is sought to be countered by the authors of this book by making the point that infectious diseases are more important in determining health status than malnutrition. They attempt to do this through a statistical correlation of data on diets and on five major diseases causing death with life expectancy at birth (LEO). The data pertains to Japan from 1949 to 1963. They find that diet and disease indices together explain 99.6% of the change in LEO. Using some "complex statistical analyses" they find that on separating out the effects of the two, "the fall in disease mortality (of the five major causes) accounted for fully 60% or more of the increase in life expectancy, whereas the improvement in nutritional sufficiency accounted for only 40% or less of the improvement in health (measured as LEO)" (p. 16). They conclude that "disease was more important than diet"!

As a scientific conclusion, this statement is on very shaky ground. It is well known that in situations of chronic undernutrition, deaths directly due to malnutrition are few. It is rather that the severity of diseases and mortality due to them is high in the malnourished. Thus malnutrition increases the mortality due to disease. The statistical correlation of diet and disease does not take this synergism into account. Also, taking total mortality rates for the five most common causes of death as the index of disease status is bound to show higher statistical correlation with LEO than if actual morbidity rates are used. With these biases inherent in the statistical analysis, if nutritional sufficiency was still found to account for 40% of the improvement in health, can that be said to be a crucial difference compared to 60% by fall in disease mortality? Can this be legitimately further extended to guide policy?

The exact weightage of diet and nutrition in determining health status is neither scientifically established yet, nor is it likely to be the same in any two situations - so intertwined and complex is the relationship. That is why, giving a 'scientific' basis for priority to disease control over malnutrition control, facilitates the evasion of difficult policy decisions addressing a broader canvas, including agricultural policy and the social distribution of resources. This is yet another instance of policy issues impinging on the making of science as knowledge.

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The understanding of the phenomenon of healthy human adaptation to the environment is meaningful only when its limits are also stated. While the various elements forming the environment, the physical, economic, cultural and biological, interact with each other, the extreme form of one can overwhelm the impact of others and produce an environment beyond the limits of normal adaptability.

Due to the specificity of environmental settings of different human groups, the degree of impact of each factor varies. If we divide societies very crudely into three broad economic groups, *concepts like 'wasteful feeding' and 'psychic hunger' apply primarily to the well-off of the 'developed countries and to the elite of the 'developing' countries* in whom disease related to over-nutrition is much more common than in the rest of the population. *The picture of well-adjusted diets but nutritional deficiencies due to the stress of infectious disease loads presented in this book, could well apply to the middle class of 'developing' countries.* In their case it could be

pertinent to debate whether additional dietary intakes to provide a safety margin is the solution or priority be given to the control of infectious diseases. Probably a combination of the two will better reflect the 'cultural adaptation' in practice.

*For the poor, the external environmental conditions are largely beyond the limits within which adaptation can occur without detracting from expression of human potential. Their process of adaptation for survival is at high human cost. Other than the high childhood morbidity and mortality and the lowered physiological work capacity discussed earlier, the decrease in non-economic work including resting and social activity found by Edmundson's own studies means a decline in human well-being. The decrease in leisure and social time would also be a major barrier to the individual and community action recommended by the authors as the starting point.*

Education for better living is also likely to achieve little benefits because, as other scholars have estimated and Sukhatme's early work on protein deficiency shows, the poor traditionally have "the best diets within their economic resources". In addition, it has been amply demonstrated that women of poor households are not able to attend adequately to child care and on maintaining hygiene because of being over-worked and lack of many physical resources (e.g. Zurbrigg, 1984). Therefore, unless the structural constraints to healthy adaptation of the poor are simultaneously highlighted and addressed, the health and development for the poor is unlikely to be achieved.

While the health service system may have little direct role in overcoming the structural constraints, it is for holistic public health to point out these linkages. Denying or obscuring them will only be counter-productive to the purpose of science as a 'truthful description of reality' or for the policy aims of health and development for all. Only when public health focusses on such issues, are the overall planners and policy makers likely to take a holistic view of development and health. *The decision to address or not address these issues is a political one - the third corner of the triangle, 'science' and 'policy' forming the other two. It is a decision each one of us concerned with health issues will have to take.*

### **In Conclusion**

Thus, in spite of all its contradictions, the importance of the book lies in the principles it carries into public health planning and the issues a critical reading of it reveal.

The contradictions in the application of their stated conceptual principles do not detract from the significance of the ideas themselves. In fact, the book allows one to examine how the enunciated principles, which are humanistically incontrovertible and very worthy of emphasis in the present health and development scenario, can get moulded into inhuman, anti-poor arguments. The authors' conclusions from their empirical studies make us realize the importance of public health analysis distinguishing between a scientific understanding of natural processes and a scientific study of the relationship between the natural processes and social factors (e.g., on the issue of diet and work output). Both are of value, more so if their boundaries are respected and their linkages recognised. The fallacies in the book highlight the need for consideration of prescriptions for problems of poverty and health in terms of societal processes of change, not restricting them to a programmatic orientation alone. They also highlight the need for a universally accepted clear definition of terms often used today, such as 'holistic' public health.

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"THE HUNGRY RARELY WRITE HISTORY, AND HISTORIANS ARE RARELY HUNGRY"  
: Reclaiming Hunger in the History of Health

Throughout much of human history, life expectancy fluctuated around an average of 20 to 25 years, a statistical mean pulled down by extremely high levels of mortality in young children, but also reflecting much higher rates of adult mortality than we face today. In contrast, most children new born in societies such as Canada today can be expected to live to "a ripe old age" of eighty years or more. This vast extension in average life span I have termed in my teaching the history of health, where "health" is defined in the most elemental sense of physical survival. The history of health is essentially the history of decline in deaths from infectious disease. The subject thus addresses what can be called the basic epidemic equation, bringing together secular trends in levels of exposure to micro-organisms on the one hand, and human (host) resistance to infectious disease on the other. It is a challenging task for most students, but one I have found to be both possible and worthwhile in conveying some understanding as to where we are on this historical trajectory and why.

The "discovery" of micro-organisms in the final decades of the 19th century was an essential event in the development of many aspects of modern medical care, surgery and immunisation in particular. In the process, the new Germ Theory of disease reshaped understanding of the determinants of ill-health and led to a dramatic shift in focus away from the human host to the microbiological side of the epidemic equation. It is probably no exaggeration to suggest that we, humankind, are still very much in the process of coming to terms with our relationship with the trillion trillion micro-organisms with which, among other creatures, we share this planet, and upon which most life, including our own, fundamentally depends. Along with shaping modern-day attitudes to health, this shift in focus can be seen to have profoundly influenced perspective on historical experience as well. I confess that my consternation with the most recent, and home-grown (Canadian), version of germ history, Andrew Nikiforuk's The Fourth Horseman, has very much flavoured this

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talk<sup>1</sup>. Nikiforuk's title comes from the last book of the New Testament, Revelation, which prophesies impending doom in metaphorical terms, the Four Horsemen of the apocalypse being God, War, Famine and Death, the last, commonly interpreted as disease or "pestilence". In spite of passing reference to the other horsemen, Nikiforuk comes to focus in his book on pestilence, both in title and text; that is, on the micro-biological side of the epidemic equation, and is yet another reminder of the powerful influence germ theory continues to hold in historical interpretations of human health and history.

The history of health, curiously enough, is a subject which has slipped between the cracks separating the major historical, medical and social science disciplines. Modernist assumptions with respect to the potency of scientific medicine may explain the omission to some extent. But it no doubt also derives from the fact that a central dimension to physical survival, the history of subsistence, and its opposite, hunger, is itself a missing historical discipline. "The history of hunger", remarks a recent text somewhat cryptically, "is for the most part unwritten. The hungry rarely write history, and historians are rarely hungry"<sup>2</sup>. Hunger has been at once too mundane and too emotive.

This paper attempts to reclaim some balance and historical perspective on the epidemic equation and health history by reviewing recent research into the relationship between hunger and infectious disease mortality in historical experience. In the process, it will offer a conceptual framework of hunger in history which derives I believe from this recent scholarship.

In the 1950s and early 60s, Thomas McKeown, a professor of Social Medicine at Birmingham University projected the subject of mortality decline onto the historiographical stage as a central question. He did so by graphing trends in yearly death rates in England and Wales from 1841 to the present for each of

<sup>1</sup> The term "germ history", aptly, is his own. Andrew Nikiforuk (1991), The Fourth Horseman: A Short History of Epidemics, Plagues, Famine and other Scourges, Viking.

<sup>2</sup> L. Newman, R. Kates (1991), Hunger in History, Brown University Press, p. 22. Considerable literature exists on the history of food, change in type and anthropological meanings of food and food sharing, in the work of Jack Goody, Leah Tannahill, and others; but there has been little systematic attention to quantitative adequacy or regularity of food (caloric) intake.

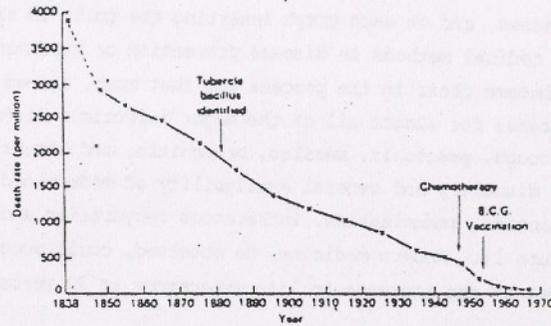
the major infectious diseases, and on each graph inserting the point in time at which effective "modern" medical methods in disease prevention or treatment became available. What became clear in the process was that much, indeed most, of the decline in death rates for almost all of the major infectious diseases (tuberculosis, whooping cough, pneumonia, measles, bronchitis, and others) occurred well before the discovery and general availability of modern medical techniques such as antibiotics, immunization, intravenous rehydration and vitamin supplements (figure 1). Modern medicine, he observed, could account for only a very small part of the increase in life expectancy to 70 years by the mid-20th century.

Through a process of examining and eliminating other possible explanations, such as change in virulence of micro-organisms or in levels of specific (acquired) immunity in the population, McKeown went on to conclude that increased human resistance to infectious disease though improvements in nutrition was probably the main factor underlying this "transformation in health"<sup>3</sup>. He acknowledged that clean water supplies and sewage systems in the final decades of the 19th century played an important role in reducing exposure to water- and food-borne diseases, such as diarrhea, dysentery and typhoid fever. But these public health measures could explain at most one-quarter to one-third of total mortality decline, and even here, he suggests, the same factor reducing lethality of air-borne diseases, *viz.* increased human resistance, may well have been contributing to the fall in water-borne infection death rates at the same time.

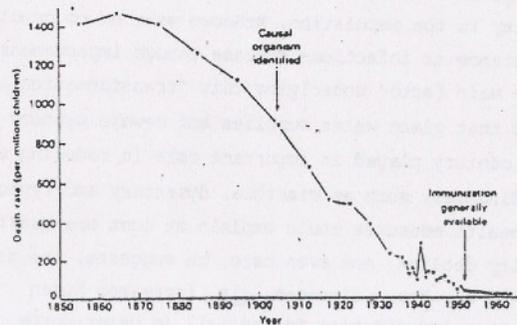
This is all by way of introduction since I am sure that many of you are familiar with McKeown's thesis and the intense debate which his work has triggered. The debate among historians has shown no signs of abating. Critics argue that McKeown provides no clear evidence of "improved nutrition": in spite of increasing productivity of English agriculture across the late 18th and 19th centuries, food production barely kept pace with growing population, and there is little evidence of per capita increase in food availability until the end of

<sup>3</sup> T. McKeown (1976), The Modern Rise of Population, E. Arnold. McKeown noted two exceptions to this general conclusion: inoculation and subsequently vaccination probably played a substantial role in the decline of smallpox mortality from early 19th century on; and, scarlet fever is the single bacterial infection for which a decline in virulence may in part explain decline in lethality since the 19th century.

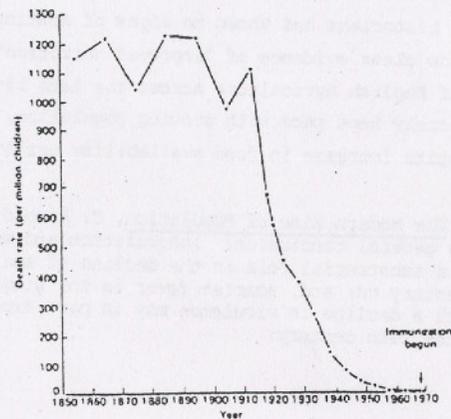
Figure 1



5.1 Respiratory tuberculosis: death rates, England and Wales.



5.3 Whooping cough: death rates of children under 15, England and Wales.



5.4 Measles: death rates of children under 15, England and Wales.

19th century, nor substantial qualitative improvements in diet until well into the 20th century. Perhaps the most influential criticism of McKeown's nutrition thesis came in 1981 with publication of E.A. Wrigley and R. Schofield's Population History of England and Wales, a monumental reconstruction of English demographic history across the period from 1541 to 1871. Through painstaking analysis of parish records, the Cambridge historical demography group established estimates of English birth, death and population growth rates across this 300-year period. They then went on to examine quantitatively the relationship between fluctuating birth and death rates and living standards across this same period. Finding only a "weak" statistical relationship between real wage trends and mortality, they postulated "an absence of any pattern linking economic conditions and mortality in England"<sup>4</sup>, a conclusion which was seen to undermine fundamentally a "nutritional" explanation of historical mortality decline in England.

The second form of criticism of McKeown's thesis has been that he underestimates the impact of public health measures such as clean water supplies and improved housing in reducing exposure to infectious disease in late 19th century England, a critique most forcefully expressed by Simon Szreter<sup>5</sup>.

My purpose is not to leap into the human resistance "versus" disease exposure debate. Both were undoubtedly significant factors underlying mortality decline and their opposition seems an unfortunate misdirection in academic discussion. I would like, instead, to look more closely at the human side of the epidemic equation. To do this, I will review briefly work which has appeared since McKeown's initial formulation of the mortality decline question, and in the process explore the ways various authors have used the term "nutrition". In my view, a clearer understanding of the various states

<sup>4</sup> E.A. Wrigley, R.S. Schofield (1981), The Population History of England, 1541-1871, Cambridge Univ. Press, p. 452.

<sup>5</sup> Szreter also highlights lack of evidence for the nutrition thesis, but is particularly concerned that McKeown gives only passing recognition to the importance of "human agency" in mortality decline in the efforts of reformers, work which culminated in sanitary reforms and reduction in occupational health risks; in S. Szreter (1988), "The Importance of Social Intervention in Britain's Mortality Decline c.1850-1914: a Re-interpretation of the Role of Public Health", Society for the Social History of Medicine, 1, 1, 1-37.

subsumed within the phrase "nutritional factor" is an essential but neglected step in the effort to assess the importance of changes in access to food in the history of mortality decline.

#### Recent Research

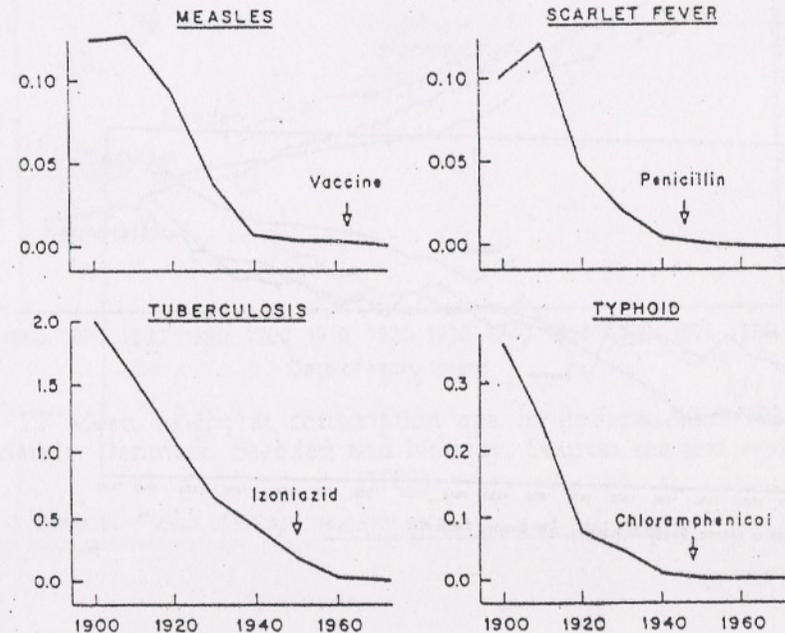
Clearly stimulated by McKeown's work on mortality decline in England and Wales, the McKinleys in 1977 estimated with similar graphs and arrows that at most only 3% of U.S. mortality decline from infectious disease in the 20th century could be attributed to modern medicine, curative or preventive — most decline in infectious disease mortality occurring, as in the case of England, well before modern medical techniques became available (figure 2)<sup>6</sup>. Other work has found that mortality decline across the late 18th and 19th centuries was not limited to England, generally similar patterns of decline being apparent for other European populations (figure 3)<sup>7</sup>. [Virtually all European countries also experienced accelerated decline from the 1870s onward, a period marked by development of urban sanitation and clean water supplies alongside an historic rise in wage rates above subsistence levels. The coincidence of these two events makes it difficult to distinguish the effect on mortality decline of better access to food, and thus greater human (host) resistance, from that of reduced disease exposure. Yet it is interesting that this accelerated decline in the final decades of the 19th century was a generalized phenomenon across Europe irrespective of degrees of urbanization, public health services or level of mortality prevailing in 1870] (figure 4).

Historians, looking further back in U.S. health history have found quite distinctive patterns: most notably, that U.S. life expectancy had already reached 50 to 55 years by the second half of the 18th century, and average heights of native-born white Americans were then approaching modern levels. On the other hand, U.S. life expectancy appears to have declined during the 19th century to approximately 45 years between 1830 to 1860, a decline attributed to rapid urbanisation, increased immigration and in particular to a considerable

<sup>6</sup> J.B. McKinlay, S.M. McKinlay (1977), "The Questionable Contribution of Medical Measures to Mortality Decline in the U.S. in the 20th Century", Milbank Memorial Fund Quarterly, Summer 1977.

<sup>7</sup> J. Vallin, "Mortality in Europe from 1720 to 1914", in R. Schofield, D. Reher, A. Bideau (1991), The Decline of Mortality in Europe, Oxford, 38-67.

Figure 4



from J.B. McKinlay, "The Questionable Contribution of Medical Measures to Mortality Decline in the U.S. in the 20th Century", Milbank Memorial Fund Quarterly, Summer 1977.

Figure 3

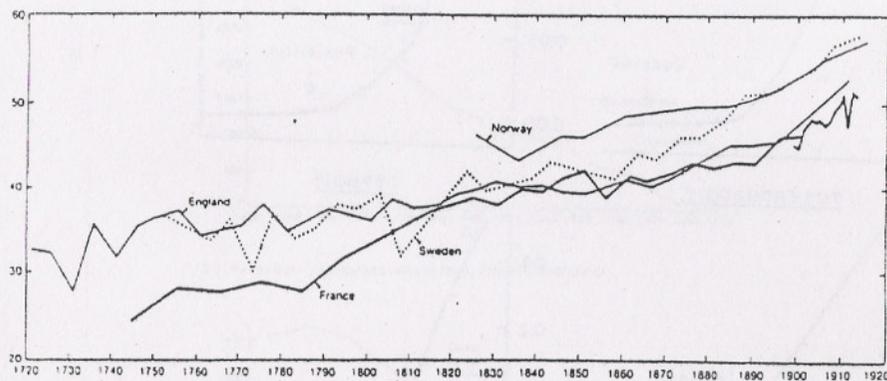


Fig. 3.3 Life expectancy at birth in France, England, Norway, and Sweden 1720-1920

Figure 4

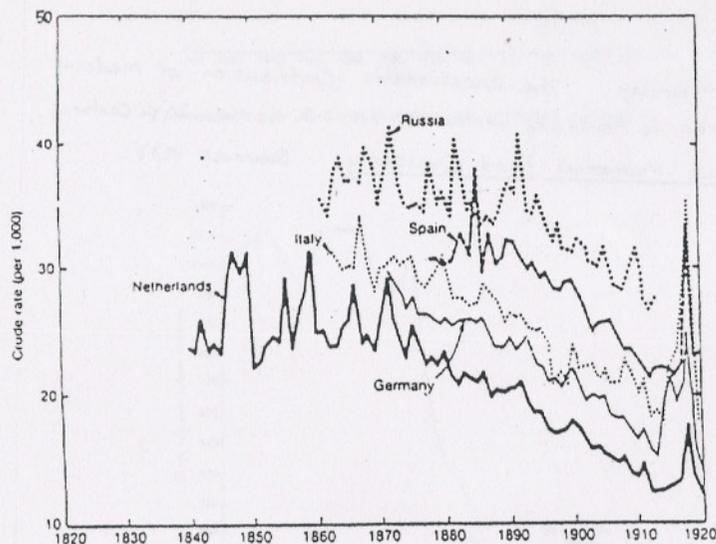


Fig. 3.2 Annual changes in crude death rates between the mid-nineteenth century and 1920 in five European countries

from J. Vallin "Mortality in Europe from 1720 to 1914", in A. Schofield et al (1991), The Decline of Mortality in Europe.

widening in income inequality<sup>8</sup>. As was the case in Europe, [1870 marks the beginning of sustained rise in life expectancy in the U.S., a period also of economic expansion and rising wages levels as well as development of urban public health services.] In the U.S. case, however, Higgs suggests a similar decline in mortality rates occurred among the rural population even though "the 1890-1920 public health movement ..almost completely by-passed the countryside". He also found that even in the major cities, late 19th century mortality decline correlates poorly with the timing of public health services. It would be wrong he suggests to conclude that sanitation was ineffective, but simply that other forces were also at play to account for rising life expectancy, in particular, rising incomes and living standards, both urban and rural<sup>9</sup>.

Tracing Chronic Undernourishment through Changes in Stature

In all this work, the question still remained: how to measure directly the effect of changes in access to food, "nutrition", for which economic indices serve as proxies. A number of historians have increasingly questioned the adequacy of measures of nutritional status derived from macro-economic indices such as real wage trends in historical research<sup>10</sup>. Arguing the need for more direct measures, some have pursued the field of historical anthropometry, studying secular patterns in height. Their efforts have provided data on stature, and conversely nutritional stunting, in various periods dating from as early as the 18th century, from which important secular patterns have emerged (figures 5 and 6). Others have begun to study birth weights patterns<sup>11</sup>.

<sup>8</sup> R. Fogel (1986), "Nutrition and the Decline in Mortality since 1700", in S. Engerman, R. Gallman eds, Long-term Factors in American Economic Growth, Univ. Chicago Press, 439-555; and R.H. Steckel (1983), "Height and per capita income", Historical Methods, 16:1-70.

<sup>9</sup> R. Higgs (1973), "Mortality in rural America, 1870-1921", Explorations in Economic History, 10, 177-95, at 187; R. Higgs (1979), "Cycles and trends of mortality in 18 large American cities, 1871-1900", Explorations in Economic History, 16:381-408.

<sup>10</sup> For a concise critique, see for example, R. Fogel, "Nutrition and the Decline in Mortality".

<sup>11</sup> See for example, R. Fogel, "Second Thoughts on the European Escape from Hunger: Famines, Chronic Malnutrition, and Mortality Rates", in S.R. Osmani (1992), Nutrition and Poverty, Oxford, 243-80; Roderick Flaud et al

Among historical anthropometricians, Robert Fogel has sought to measure statistically the relationship between patterns in height and corresponding levels of mortality. Analysing patterns for England, France and Sweden, he has found a close correlation in all three countries between mean stature and prevailing crude death rates across the period 1775-1975. He concludes that improvements in average nutritional status (as indicated by stature and body mass index) appear to explain between 80 and 100% of the decline in mortality rates in these three countries between 1775 and 1875. For the subsequent 100-year period, 1875-1975, stature predicts 50 to 60% of mortality decline<sup>12</sup>.

These findings suggest that approximately two-thirds of improvement in life expectancy in western Europe since the late 18th century was associated with decline in chronic undernourishment as expressed by stature. In the case of France where life expectancy was lower (27 years) at the beginning of this period, this figure is closer to three-quarters. These are conclusions very different than those derived from real wage analysis in the Cambridge analysis of English demographic history, and they raise a number of questions. First, of course, association is not necessarily causation. Stature could well be affected by other factors, notably the prevalence of infectious disease, infection raising food requirement due to the associated nutritional drain in fighting off disease. This raises the question as to how the effects of improved access to food on stature can be distinguished from that of decline in exposure to infection. Second, why are stunted persons, as distinguished from genetically short, at greater mortality risk?

Fogel clearly recognizes that stature is a measure of net nutritional status and that part of the increase in stature could well be a secondary effect of declining exposure to infectious disease. Yet a general sense of the relative impact of each of these two factors can be gauged perhaps by looking at the 19th century during the early years of industrialization. In a number

(1993) Height, Health and History: Nutritional Status in the United Kingdom, 1750-1980. Cambridge Univ. Press; W. Peter Ward (1993) Birth Weight and Economic Growth: Women's Living Standards in the Industrializing West, Univ. of Chicago Press; John Komlos (1989) Nutrition and Economic Development in the 18th Century Hapsburg Monarchy: An Anthropometric History, Princeton Univ. Press.

<sup>12</sup> R. Fogel, "Second Thoughts".

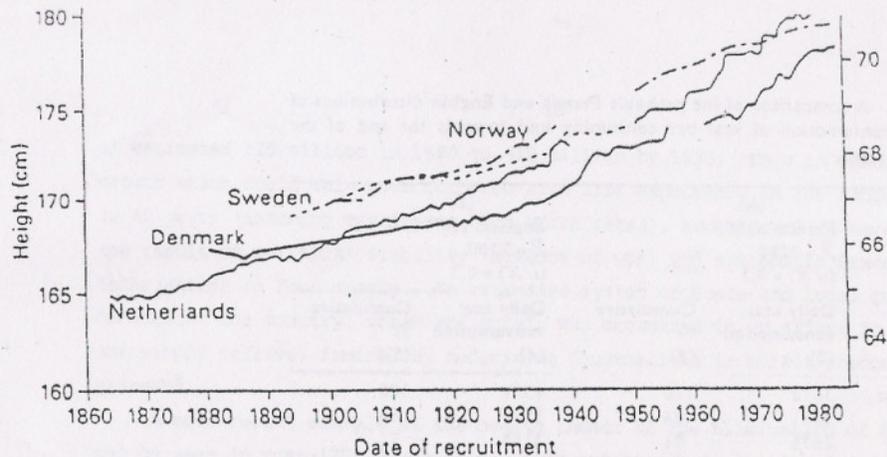
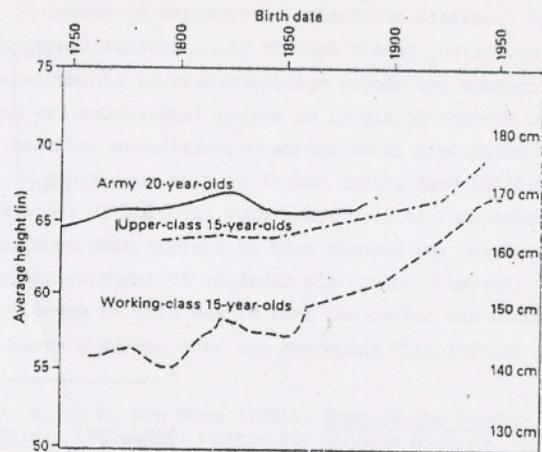


Figure 1.7 Mean height at conscription age in Europe, 1865-1984. Netherlands, Denmark, Sweden and Norway. Source: see text and Fl (1983).

from R. Floud (1993). Height, Health and History

Figure 6



Heights in Britain, 1750-1950. Source: see text.

from R. Floud (1993). Height, Health and History

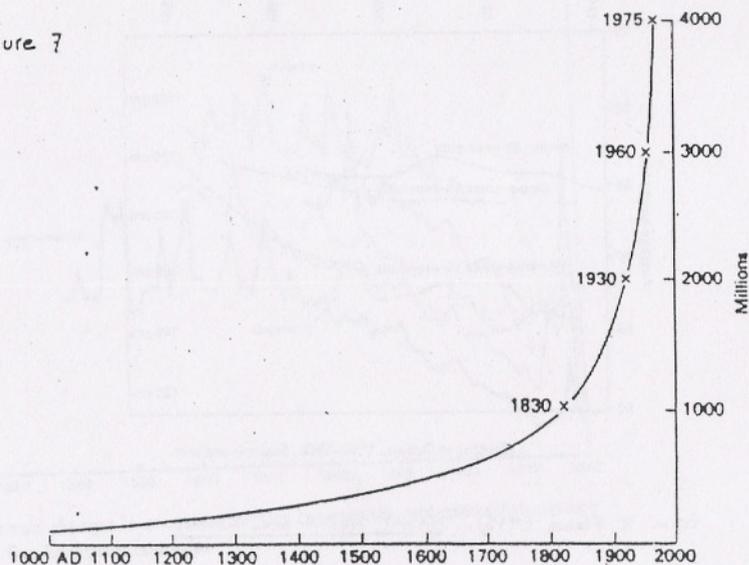
Table 1. A comparison of the probable French and English distributions of the daily consumption of kcal per consuming unit towards the end of the eighteenth century

Decile (1)	(A) France c.1785 $\bar{X} = 2290$ $(s/\bar{X}) = 0.3$		(B) England c.1790 $\bar{X} = 2700$ $(s/\bar{X}) = 0.3$	
	Daily kcal consumption (2)	Cumulative % (3)	Daily kcal consumption (4)	Cumulative % (5)
1 Highest	3672	100	4329	100
2 Ninth	2981	84	3514	84
3 Eighth	2676	71	3155	71
4 Seventh	2457	59	2897	59
5 Sixth	2276	48	2684	48
6 Fifth	2114	38	2492	38
7 Fourth	1958	29	2309	29
8 Third	1798	21	2120	21
9 Second	1614	12	1903	13
10 First	1310	6	1545	6

Source and procedures: see Fogel (1987), esp. Tables 4 and 5 and n.6.

from R. Fogel "Second Thoughts on the European Escape from Hunger", in S.R. Osmani (1992), Nutrition and Poverty.

Figure 7



1.1 The modern rise of world population.

from T. M'Keown (1976). The Modern Rise of Population.

of western European countries, both stature and life expectancy continued to rise across the 19th century in spite of what must have been a dramatic increase in levels of exposure to infectious disease due to rapid urbanization, extreme degrees of slum crowding<sup>13</sup> and greater population mobility. In other words, the relative impact on mortality levels of increased exposure to disease appears to have been overridden by other influences on survival chances, most likely in the economic realm affecting levels and regularity of access to food<sup>14</sup>.

As to the second question, the relationship between stunting and higher mortality is not precisely understood as yet. But clearly it is not shortness *per se* that kills but the physical conditions underlying stunting of biological potential (compromised immunity, greater levels of chronic disease and so on) in addition to the implications of shortness on employment possibilities.

The broader significance of this work in historical anthropometry I believe has been a reclaiming of hunger — both the actual word and concept — as a credible and central aspect to demographic, health and economic history. This can be seen in other aspects of Fogel's work. For example, he has taken a series of data on daily food intake estimates (caloric consumption) for France in 1780, and looks at the implications. He does this by applying to this mean level of 2290 calories a distributional curve characteristic of observed distributions in other populations, both modern and historical, which gives an estimated breakdown of calorie intake by population decile (table 1)<sup>15</sup>. What he observes is that the lowest decile, or 10%, of the population is likely to have had access to approximately 1310 calories; that is, were literally

<sup>13</sup> For a description of British housing conditions across the 19th century, see J. Burnett, "Housing and the Decline of Mortality", in R. Schofield (1991), Decline of Mortality, 158-76.

<sup>14</sup> This was not the case for England where both life expectancy and stature (figure 6) leveled off mid-century. What is perhaps surprising is that in spite of the extraordinarily rapid urbanisation of the population amidst negligible sanitary facilities and appalling housing conditions, levels of mortality did not soar. In 1801, for example, only one-fifth of the English population were town-dwellers; by 1851, this proportion was half, and by 1901 four-fifths. At the same time, this mid-century plateau in life expectancy may equally reflect economic factors associated with widening gaps in income, as in the U.S. (see above, at note 8).

<sup>15</sup> Fogel, "Second Thoughts", 268-70.

starving, with daily caloric intake at or even below Basal Metabolic Rate<sup>16</sup>. What is interesting about this work is that Fogel is thinking in terms of how people eat, or do not<sup>17</sup>. In the process, he has begun to reconceptualize the very nature of "the nutrition factor" in terms of chronic hunger (not enough to eat), what is often termed undernourishment; and acute hunger (not nearly enough to eat), or starvation, two quite different human predicaments in historical experience.

The question posed by this work is how these findings with respect to stature and life expectancy in western Europe can be placed in the larger context of mortality decline through history. In other words, how much of the history of health (increasing life expectancy) does the 200 year period from 1775 in Western Europe represent? For clearly, by the late 18th century, all three populations of England, France and Sweden had already escaped what can be termed the first stage of historical hunger, that marked by recurrent famine or subsistence crises.

#### Acute Hunger and Historical Health

Throughout most human history, from early (Neolithic) agricultural societies, ancient and classical periods and up through the Middle Ages in European history, life expectancy remained in the low twenties, an average hiding enormous year to year fluctuations. Birth rates though high were only slightly higher than death rates, explaining the generally slow growth in world population until very recently (figure 7).<sup>\*</sup> The decline and disappearance of recurrent famine was often a gradual process occurring over centuries, as in the case of England from the 1500s to 1700s, making it difficult to see clearly its impact on life expectancy. But several historical examples exist of sudden "escape" from famine during periods for which reasonable estimates of mortality are possible. One is 18th century China under the Ch'ing dynasty. The "peace and prosperity" established across the 18th century saw population triple from

<sup>16</sup> Basal metabolic rate is the energy required for basic physiological functions as breathing and blood circulation in the absence of any physical activity whatever.

<sup>17</sup> This approach lies in marked contrast, for example, to the use of macro-economic indicators such as real wage trends as a measure of "nutrition", work which Fogel has politely but indisputably taken to task as a measure of hunger. See Fogel, "Nutrition and the Decline in Mortality", 495-506.

an estimated 125 million in 1680 to 410 million by 1830. This is demographic growth which could only have occurred with life expectancy in the range of 35 to 40 years (assuming continuing high birth rates), and appears to have been the result of political stability (absence of war) and systematic State intervention in food supply. An extensive system of State and local granaries throughout the country, urban and rural, was organized in an effort to prevent, not simply relieve, famine, by moderating fluctuations in market foodgrain prices<sup>18</sup>.

A more recent example of the health impact of the elimination of famine can be seen in post-1920 South Asia. Life expectancy in British India was also about 20 years at the turn of this century, famine being a recurring event across much of the subcontinent. With mounting pressure from the emergent nationalist movement, the British administration abandoned its laissez-faire and Malthusian attitudes to famine and in the final years of the 19th century instituted increasingly effective famine prevention policies in the first decades of the 20th century. Mortality levels responded, crude death rates declining from 40-45 per 1000 in 1901 to 27 per 1000 by Independence in 1947 (figure 8)<sup>19</sup>, a decline which also reflects a near doubling in life expectancy. In both these examples, it is unlikely there was any change for most of the population in levels of exposure to infectious disease. If anything, it probably increased substantially through rising population densities and dramatic developments in transportation across the subcontinent. Nor is it likely there was substantial change in levels of chronic undernourishment. In India, for example, stagnation in agricultural production across this same period led to continuous decline in per capita food availability across the last four decades of colonial rule leading up to Independence in 1947. In other words, what what appears to have changed was not levels but rather gaps in consumption, episodes of epidemic starvation (famine).

Why I digress in this way is that the period for which Fogel examines stature in Western Europe does not encompass this initial stage of historical

<sup>18</sup> P. Will, R. Bin Wong (1991), Nourish the People: The State Granary System in China, 1650-1850, Centre for Chinese Studies, Univ. of Michigan.

<sup>19</sup> Sumit Guha (1991), "Mortality Decline in early Twentieth Century India", Indian Economic and Social History Review, 28, 4, 371-87.

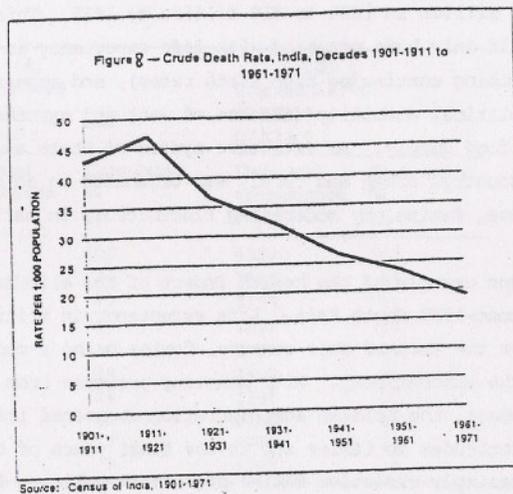
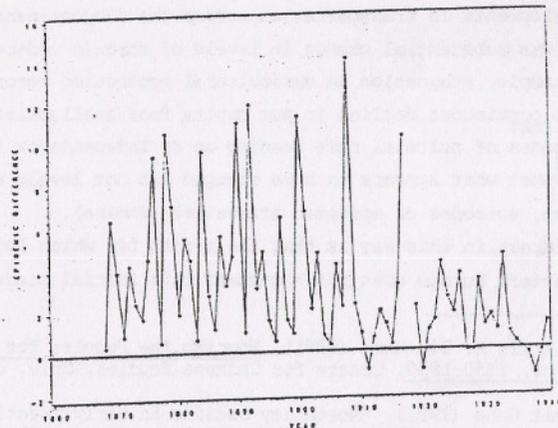


FIGURE 9 - MALARIA MORTALITY (Oct -Dec), PUNJAB 1868-1940



Source: S. Zurbriggen (1994), p. 131.

hunger and "health", that marked by recurrent acute hunger (starvation) in addition to underlying undernourishment<sup>20</sup>, for it would appear that acute hunger is captured poorly, if at all, by stature<sup>21</sup>. In other words, to the impact of declining chronic hunger (which Fogel estimates through stunting) must be added the health impact of this earlier escape from acute hunger, during which life expectancy appears to have risen from the low 20s to approximately 40 years.

Exploring the Link between Pestilence and Acute Hunger

Most famine deaths in 19th century India were not of course due to starvation *per se*. They were expressed as epidemic mortality, "scarcity", in the words of one provincial Sanitary Commissioner, "rendering [the poor] incapable of resisting the assaults of any disease going"<sup>22</sup>. It is possible in the case of India -- perhaps uniquely so -- to explore more precisely the mechanism(s) linking famine and epidemic disease because vital registration records, available from the 1860s, span this critical period of transition in epidemic patterns and mortality decline. It is this question which has been at the heart of my own research over the past several years -- in effect, the

<sup>20</sup> While Fogel clearly distinguishes acute from chronic hunger, he suggests acute hunger played only a minor role in high mortality levels historically. Based on Wrigley and Schofield's demographic figures, he has calculated that famine deaths accounted for only 13% of excess deaths in England for the 210 year period between 1541 and 1750. Yet one should be cautious about generalizing from the English experience. [This period of English history is unrepresentative of most historical mortality experience, for England appears to have already escaped recurrent (in contrast to episodic) subsistence crises from the 16th century onward, reflected in life expectancy ranging between 32 and 39 years throughout the period of the Cambridge population history study.]

<sup>21</sup> Few anthropometric records are available across periods of recurrent famine, so the question of distinguishing between acute and chronic hunger in stature patterns has not been addressed in any detail in the literature to date. Floud has found a transient dip in Irish heights for those cohorts between the ages of 8 and 35 years at the time of the famine in 1846-47. Yet the fact that this decline includes an age group well beyond the potential growth period, suggests it may instead reflect increasing chronic hunger in the decade or so leading up to the actual famine. No trace of the famine appears in height patterns for children 0-7 years of age at the time of the famine, perhaps reflecting typically very high mortality in young children affected by famine. See R. Floud, Height, Health and History, 205-06, 212.

<sup>22</sup> Report of the Punjab Sanitary Commissioner (1878), pp. 28-9.

nature of the relationship between famine, the Biblical third horseman, and pestilence, the fourth.

Malaria was considered the leading cause of death by sanitary officials throughout the British colonial period. Punjab province in the north-western corner of the subcontinent was especially notorious for the severity of its autumn malaria epidemics, autumn malaria deaths fluctuating in classic saw-tooth fashion throughout the 41-year period between 1868-1908 (figure 9). Regression analysis has shown that two factors, summer monsoon rainfall and prevailing wheat prices, were highly significant predictors of this year to year variation in malaria deaths in the Punjab plains: rainfall being essential for malaria transmission (affecting mosquito numbers and longevity) in this region, and soaring foodgrain prices reflecting famine, and thus prevalence of acute hunger (starvation).

This pattern changed dramatically after 1908. Mean autumn malaria death rate in the 33-year period between 1909 and 1941 abruptly dropped to less than one-third that for the earlier period. There is no evidence, however, of any decline in rates of malaria transmission, or infection in the province across this second period<sup>23</sup>. What appears to have changed after 1908 was not incidence of malaria infection but rather its lethality, the proportion of infected people dying from the infection: in epidemiological terms, a shift in case fatality rate. One explanation for declining lethality of malaria infection could be treatment. Yet per capita availability of quinine in the province was so low even by the late 1930s, in particular in the rural areas, as to make this explanation extremely unlikely, and had increased only marginally since the last severe epidemic in 1908. The one variable in the malaria equation which changed indisputably was the prevalence of acute hunger (famine)<sup>24</sup>. With the exception of the 1943 Bengal famine, the recurrent

<sup>23</sup> There was no significant change in rainfall, nor in epidemiological measures of malaria infection rates, viz. spleen and parasite rates across the 1868-1941 period, nor any apparent decline in severity of flooding in the province. For details, see S. Zurbrig (1992), "Hunger and Epidemic Malaria in Punjab, 1868-1940", Economic and Political Weekly, Jan 25, PE 2-26; and Hunger in India's Epidemic History, in preparation.

<sup>24</sup> Interestingly, the correlation between rainfall and malaria mortality remains equally strong after 1908, even as actual mortality from these epidemics declined dramatically. On the other hand, the statistical

famines so characteristic of the 19th century effectively disappeared after 1918<sup>25</sup>.

As some of you may be aware, DDT has repeatedly been held responsible for the "explosive" 20th century growth in Third World populations through its extensive use as a mosquito insecticide in reducing malaria transmission and mortality — an example, it is said, of the effect of introducing modern medical technology (some have suggested, prematurely) into economically underdeveloped societies. Yet on a graph of Punjab malaria mortality, the "arrow" for DDT comes three decades after this major drop in death rate. Another McKeownite example it would seem of shutting the barn door after the horse, rather horseman, has bolted. This of course does not mean DDT in the 1950s and 60s was ineffective in killing mosquitoes, or in reducing malaria transmission and some malaria deaths, but rather that it came at a time when mortality from malaria infection had already declined to a fraction of historic levels in South Asia. What is especially interesting in this example, is that this effect on malaria mortality appears to have come mainly from decline in acute hunger (starvation), for it is unlikely that chronic undernourishment declined substantially or at all after 1908, as we have seen above. Further, post-1908 epidemic decline was not limited to malaria: similar patterns are apparent for other infectious diseases, such as cholera and smallpox<sup>26</sup>.

Malaria appears to have been by far the greatest slayer or "Fourth

relationship between wheat price and malaria mortality disappears after 1908.

<sup>25</sup> To arrive at a definitive answer as to the impact of acute hunger on malaria case fatality rate, what is required, epidemiologically speaking, is a controlled study to observe mortality levels with and without mass starvation while entomological conditions remain constant. This is of course unethical as medical research, but the Bengal famine of 1943 somewhat approximates these conditions. Malaria was considered a leading cause of death in 19th century Bengal also, but as in Punjab, fever death rates declined regularly after 1920. During the 1943 famine, epidemic malaria appears to have returned in a highly lethal form, specifically among the starving portion of the population. This sudden, transient, and selective increase in malaria mortality among famine victims cannot readily be explained in terms of greater exposure to infection, and thus may represent the closest approximation to a "controlled" study as is likely to be found in historical experience.

<sup>26</sup> Christophe Guilmoto (1992), "Towards a new demographic equilibrium: The inception of demographic transition in south India", Indian Economic and Social History Review, 29, 3, 247-89.

Horseman" in recent South Asian health history. Yet clearly in this pestilential role, malaria did not ride alone but in tandem with the third horseman, acute hunger (Famine). And probably through history, with the second horseman as well, War, as a potent trigger and factor underlying vulnerability to famine, a subject which we look at more systematically in the course. Whether or not this relationship between hunger and malaria mortality can be extrapolated to epidemic history elsewhere must await further research. But what I believe this experience points to, aside from somewhat ponderous metaphors, is the critical importance of an adequate conceptual understanding of hunger in the study of health history (mortality decline). If we think back for a moment to McKeown's "improvement in nutrition" hypothesis, for example, do we know, can we know, what he meant by the term? In fairness, the term "nutrition" was not McKeown's creation. The term derives from early 19th century biochemical investigations into the basic ("macro") constituents of food: carbohydrate, fat and protein. With subsequent discoveries of micro-nutrients in the early decades of this century and the emergence of nutritional science as a distinct biomedical discipline, interest in qualitative aspects of food increasingly took the place of discussions of quantitative issues within medical, public health and government fora. In the process, one sees in the public health literature of this period a shift in discussion away from the human host side of the epidemic equation, and therefore social conditions, poverty and hunger, to the micro-biological domain of micro-nutrients<sup>27</sup>. At the same time, of course, a parallel reduction of infectious disease to micro-organisms was taking place. With this shift in scientific focus, so also in language itself. Hunger, an eminently concrete condition, both acute and chronic, became sidelined by "nutrition", a term which in its general and often poorly defined usage has tended to obscure the two central human predicaments of little or nothing to eat. Without a conceptual vocabulary, hunger became in effect very difficult to talk about, and in the process even more problematic to measure.

#### Reconceptualizing the "Nutrition Factor"

The relative neglect of hunger in modern historical inquiry is curious,

<sup>27</sup> Celia Petty (1987), "Food, Poverty and Growth: The Application of Nutrition Science, 1919-1939", Bull. Soc. Social History of Medicine, 37-40.

for as a pervasive reality in pre-modern existence it fairly shouts at one from the historical records. The reluctance to address hunger conceptually and analytically stems perhaps from a sense that the term is unscientific, imprecise, worse, emotional. "Nutrition", or "malnutrition" has the cachet of scientific respectability", Diana Wylie has recently remarked, while "hunger does not"<sup>28</sup>. If so, this sense of imprecision is unwarranted. In a study of health conditions in rural India, for example, D. Banerji, a professor of Social Medicine at Jawaharlal Nehru University in New Delhi, recently has documented present-day hunger in Indian villages in terms of household meals per day over the course of several years' observation<sup>29</sup>. He defines as poor those families who do not have regular access to two square meals a day throughout the year; "square" defined purely in caloric terms as enough staple food (usually a coarse millet or rice) to satisfy hunger, and observes that over one third of families in the study villages have only a single meal per day during slack agricultural seasons for varying intervals over the course of a year. Among these households, the poorest intermittently have access to none, that is zero square meals a day, in particular landless day labourers, for whom access to food fluctuates with the daily vicissitudes of wage labour availability and personal health /ill-health.

Banerji is correct, I believe, in suggesting that two "square" meals per day is probably enough to meet basic calorie requirements, assuming relatively equal distribution. One meal per day on the other hand clearly is not, and implies a considerable degree of undernourishment, what we have referred to above as chronic hunger, "not enough". This is so because in much of the world, and throughout most history, the staple diet of the poor is grain- (or tuber) based, making it is very difficult in terms of physical bulk to consume an entire day's calorie requirement in a single meal. Zero squares meals, on the other hand, denotes acute hunger, (not nearly enough), that is, starvation, implying at that level continuous weight loss. Though the two states, acute and chronic hunger, represent points along a continuum of caloric insufficiency, the practical distinction lies in relative mortality risk over

<sup>28</sup> Diana Wylie (1989), "The Changing Face of Hunger in Southern African History", Past and Present, Feb, p. 160.

<sup>29</sup> D. Banerji (1981), Poverty, Class and Health Culture, New Delhi, p. 82.

time. Acute hunger is a state where life cannot be supported beyond the short-term. Chronic undernourishment is associated with higher mortality risk as well due to compromised immuno-competence, but a risk less immediate and less absolute.

What is interesting in this classification is that Banerji recaptures core distinctions with respect to hunger which appear in historical experience. A number of witnesses to the late 19th century famine commissions in India, for example, expressed hunger in exactly these terms, noting with alarm that even in normal times, years of good harvests, many landless households routinely had access to only a single meal each day. The categories of 0, 1, 2 meals per day in essence encompass the two central aspects of hunger in human experience, on the one hand reflecting (in)adequacy of levels of food (calorie) intake, chronic undernourishment, and on the other, (ir)regularity of access to food, that is, the frequency with which subgroups of a population slip below one square meal into starvation (acute hunger). At the same time, it highlights the preeminent historical predicament, survival precariousness, as a pervasive reality for subgroups — what distinguishes pre-modern existence from the modern — a reality which continues to be reflected in cultural expressions which are commonplace even today. In southern India, for example, the colloquial greeting of 'How are you?' ("sappitachcha?") literally asks, "Have you eaten?" — that is, eaten anything?<sup>30</sup>

If we could graphically sketch acute and chronic hunger through history, we would be tracing, in effect, relative prevalence of zero, one and two meals per day in specific societies or populations through time — the term prevalence here being used in its epidemiological sense of frequency, duration, and social extent. Such a framework of course is highly schematic, requiring a number of qualifications in the specific instance. Perhaps one of the most important is that young children under the age of five years require far more than two meals a day because of their high food requirements for growth and relatively small

<sup>30</sup> A similar greeting has been common in China. See Walter H. Mallory (1926) *China: Land of Famine*, New York.

stomach size<sup>31</sup>. Yet the value of such a general framework lies in that it highlights basic distinctions in the character of hunger which are critical for tracing secular trends in access to food.

\* [Two questions: For historians (social, health or economic) how can we capture these shifts in access to food in historical research? And where are we on this meals-per-day trajectory? With the decline and "escape" from recurrent famine in early 19th century western Europe for example (and in England several centuries earlier), hunger remained but mainly in the form of chronic undernourishment<sup>32</sup>, profoundly influenced by conditions of work including lack thereof. (Addressing "conditions of work" in the broadest sense, this second stage of historical hunger can be seen to be shaped not just by wage levels, but by regularity and security of employment, hours of work, energy demands of physical labour, and even more profoundly by structure of work for women in particular as it precluded or otherwise, care and feeding of their young children, including those in utero.)]

\* [1870 marks a point of acceleration in the general post-1750 rise in life expectancy in much of Western Europe, as we have seen above, and also North America. Dramatic shifts in the "conditions" and security of work took place across the final decades of the 19th century and early decades of the 20th. These changes were in addition to rising wage levels due to rising productivity brought about by industrial production, and reflect also the emergence and growing strength of trade union organisation and labour and occupational

<sup>31</sup> Many other factors would have to be taken into consideration in the specific instance, eg. in the case of adults, the possibility exists that short-term deficits could be made up during subsequent periods of food abundance. It also raises the question as to what is "enough", and the debate over "adaptation" to low caloric intake, questions of variation in specific caloric requirement depending on individual variability and lower requirement due to previous childhood deficit and resulting stunting. Such issues make the task more complex but do not alter the significance of the basic framework.

<sup>32</sup> Of course, acute hunger remained, as in the case of India today, since at any one time, some individual households would slip from poverty into frank destitution with loss of work due to ill-health, etc. This can be termed "endemic" starvation as distinguished from "epidemic" which we term famine. While clearly contributing to high mortality, endemic acute hunger in 19th century England was probably much less prevalent than chronic hunger.

legislation<sup>33</sup> What can one imagine occurring in the profile of meals per day?

This is a history which yet remains to be systematically explored. It is clear that central to tracing this second stage of historical hunger in western Europe is decline in chronic hunger. It is central as well to assessing the impact of this decline on life expectancy as it rose from 45 years to just under 70 years by the end of the second world war<sup>34</sup>. The timing of improvements in working conditions coincides of course with major improvements in sanitation (clean water) and as well as a beginning reversal in levels of extreme crowding. So it is difficult, perhaps impossible, to separate their relative contributions to rising life expectancy. A hint of the impact of regular employment and food purchasing power, however, can be glimpsed from British life expectancy trends in the decades encompassing each of the two world wars. The following table comes from Hunger and Public Action, a book co-authored in 1989 by Amartya Sen and Jean Dreze, and presents the increase in life expectancy at birth in England and Wales in each of the first six decades of this century. While the increase was between one to four years in each decade, there were two decades in which the increase was remarkably greater (around seven years). These were the decades of the two world wars, and it appears that much of the improvement within these decades occurred during the war years.

<sup>33</sup> David Barnes has recently emphasized this question, suggesting that "length of workdays and workhours - which tend to get lost amid discussions of wages or diet - may be the most unjustly neglected index of material welfare"; in "The Rise or Fall of Tuberculosis in the Belle-époque France", Society for the Social History of Medicine, August 1992, 279-90, at 286.

<sup>34</sup> In 1952 life expectancy for men in England and Wales was 67.1 years, and for women had reached 72.3 years: U.N. (1982), Levels and Trends of Mortality since 1950.

Table 2 Longevity expansion in England and Wales

Decade	Increase in life expectancy per decade (years)	
	Male	Female
1901-11	4.1	4.0
1911-21	6.6	6.5
1921-31	2.3	2.4
1931-40	1.2	1.5
1940-51	6.5	7.0
1951-60	2.4	3.2

Source: Based on data presented in Preston, Keyfitz, and Schoen (1972: 240-71). See also Winter (1986) and Sen (1987e).

from J. Dreze, A. Sen (1989). Hunger and Public Action, p.182.

1914

It is difficult in the case of the first world war to relate this "paradoxical" rise (leap) in civilian life expectancy either to medical care, public health measures, or indeed reduced exposure to infection. The war years were marked both by severe crowding and housing shortage (a massive influx of new workers into urban war-related industries), as well as the channeling of half of all British doctors into army service. [In a recent study of health and social conditions during the war, J.M. Winter's has located most of the decline in mortality as occurring within the working classes. As a result, these years saw a dramatic narrowing of class differentials in life expectancy, due primarily, he concludes, to "improvement in nutritional standards of the working class, and especially of the poorest strata within it."<sup>35</sup> He attributes this to the virtual elimination of unemployment among the able-bodied, a doubling of wage levels for some of the most poorly paid sectors such as agricultural labourers, a rise in employment of married women at relatively well-paid work, and also secure allowances to soldier's wives.]

<sup>35</sup> J.M. Winter (1986), The Great War and the British People, Harvard Univ. Press.

\* The question remains, what kind of improvement in "nutrition" took place? Improvement in quality of diet in the emerging nutritional science sense of the term probably did not occur. Meat consumption per capita declined substantially during the war, with bacon substituting for meat<sup>36</sup>. And though wartime food consumption surveys did not include data on fruit and vegetables, it is likely their consumption declined as well, with available supplies channelled into the six million strong armed forces. Per capita calorie consumption, on the other hand, was well above 3000 calories, most of the population eating enough, if not elegantly, based on staples of bread, oatmeal, potatoes and milk — two "square" meals, and perhaps more; enough to satisfy hunger. To appreciate the significance of these meals, it is helpful to remember that at the turn of the century, levels of destitution in England were still such that fully one fifth of the population ended their lives in workhouses with pauper funerals<sup>37</sup>. In the case of the second world war, much of the decline in civilian mortality rate occurred after 1941 and likewise has been attributed to increased employment and food rationing<sup>38</sup>.

Winter's thesis with respect to the beneficial effects of the first world war on civilian health has been questioned on technical grounds, with critics suggesting that the war years perhaps saw less of a marked acceleration in mortality decline than simply continuation of the existing trend already established before the war began<sup>39</sup>. Clearly the years leading up to the first world war saw the initiation of major social welfare programmes as well as important labour legislation which together undoubtedly improved access to food for some among the working and non-working poor. In turn these changes must have contributed substantially to the improvement in life expectancy in the initial four pre-war years of the 1911-21 decade, and in the years following

<sup>36</sup> Ibid, p. 216.

<sup>37</sup> John Burnett (1979), Plenty and Want, Scholar Press, London, p. 126.

<sup>38</sup> R.M. Titmuss (1950), History of the Second World War: Problems of Social Policy, ch. 25 (London: HMSO).

<sup>39</sup> B. Harris, "The Demographic Impact of the First World War: An Anthropometric Perspective", Society for the Social History of Medicine, 6, 3, 343-66.

the war<sup>40</sup>]

Yet regardless of the relative impact of social welfare programmes versus increased war-time employment, it is clear that civilian mortality continued to decline across the war period in spite of a very substantial increase in urban crowding and related exposure to infection. What is also interesting is that this unprecedented increase in British civilian life expectancy across the 1911-21 decade occurred in spite of the 1918 influenza pandemic, what is routinely referred to as the archetypal "pestilence" of the modern era. Clearly there were many influenza deaths among the civilian population in England in 1918. Yet its impact on mortality was far outweighed, it appears, by the positive effect on survival rates of improvement in access ("entitlement") to food, a situation in contrast to that on the continent where influenza deaths rates in 1918 were much higher, war having dramatically disrupted civilian economies and infrastructure.

#### [Placing 1994 on the Historical Trajectory

\* By mid-20th century, when effective methods of infectious disease treatment and prevention (antibiotics, immunization, vitamin tonics) became widely available, life expectancy at birth in England and North America had already reached approximately 70 years.] In the ensuing decades, modern medical care clearly has played a considerable role in further improvements in life expectancy to 77 years in Canada by 1993, particularly with respect to perinatal survival rates. [Yet hunger can still be identified as a probable factor underlying class differentials in mortality rates in many post-industrial societies. Mean height of working class males in Britain today, for example, is one and a half inches (3.5 cm) less than among the professional class, a gap considerably smaller than the four inch differential between these classes in the early 19th century, yet a marker of relative deprivation nevertheless.] Sweden, and possibly Norway as well, stand out in late 20th

\* <sup>40</sup> This included, among others, the 1908 old age pensions Act, the 1911 national insurance Act, minimum wage legislation in the "sweated" industries where women predominated (1908 Trades Board Act), school meals programme (1906), and unemployment insurance in several trades most vulnerable to cyclical employment. See Donald Read (1979), England 1868-1914, Longman. The same is true for the WW2 decade, where a great extension of social welfare programs in the years immediately following the end of the war no doubt also contributed to reduction of inequalities and improvement in life expectancy across the 1941-51 decade as a whole.

nevertheless. Sweden, and possible Norway as well, stand out in late 20th century as the only societies where class differentials in stature appear to have been eliminated<sup>41</sup>. And historical anthropometricians in Britain today question whether beginning with the child cohorts of the 1980s we will begin to see these differentials widen rather than close<sup>42</sup>, a question which in our increasing relegation of the poor to food banks may well be of relevance for Canada as well.

I am astounded on a regular basis when I open the pages each day of the Globe and Mail to be greeted with yet another pestilence warning — "The Return of the White Plague", "Killer disease spreading east, U.S. experts say", etc. In spite of his introductory insights to the contrary, Andrew Nikiforuk leaves his readers with a similar sense of overriding health insecurity. "The Fourth Horseman still rides into our lives at his convenience", he warns. "However hard we try, we can't beat the superorganism, bribe the Horseman or ignore the immutable presence of pestilence in history"<sup>43</sup>, a tone reminiscent of the final pages of William McNeill's Plagues and Peoples. Aside from the Malthusian undercurrent which marks both these books, this view reflects, I believe, a profound misreading of the historical source and basis of health. The fourth horseman generally did not ride alone, if in fact we mean those infectious diseases which were responsible for most mortality through history. Such an interpretation is not simply incomplete, but in its germ-focus lends itself to alarmist tendencies which bear ominous implications as well. It appears

<sup>41</sup> R. Floud, "Anthropometric Measures of Nutritional Status in Industrialized Societies: Europe and North America since 1750", in S.R. Osmani Nutrition and Poverty, 219-41; G. Lindgren (1976), "Height, weight and menarche in Swedish urban school children in relation to socio-economic and regional factors", Annals of Human Biology, 3, 6, 501-22; G.H. Bruntland (1980), "Height, weight and menarchal age of Oslo schoolchildren during the last 60 years", Annals of Human Biology, 7, 4, 307-22; R. Floud "Medicine and the Decline of Mortality: Indicators of Nutritional Status", in R. Schofield et al (1991), The Decline of Mortality in Europe, p. 150.

<sup>42</sup> R. Floud, "Anthropometric Measures", p. 240.

<sup>43</sup> Nikiforuk, Fourth Horseman, p. 181. This sense of health insecurity has an interesting parallel in the 1940s warnings from nutritional scientists of "hidden hunger" and the need to "rescue 45 million Americans from hungerless vitamin famine"; see, H. Levenstein (1993), Paradox of Plenty: A Social History of Eating in Modern America, OUP, p. 23.

Nikiforuk's purpose to his book is to place AIDS in the context of historical pestilence. Yet reduced to a single (fourth) horseman, interpretation of AIDS becomes limited to an individualist and moralistic framework -- akin through history to the blaming of the poor for their pestilential fate, and an illustration of the continuing force of the medical (germ theory) model in shaping interpretation of human health.

"We are in some danger", McKeown remarks in his concluding pages, "of crossing the delicate line which divides a quiet confidence in health from a morbid pre-occupation with its loss". That quiet confidence, derived from historical perspective on the significance of "daily bread" and elemental sanitation, will be essential, I suspect, for addressing adequately and wisely the modern socio-economic<sup>44</sup> and environmental sources of ill-health which we face as post-industrial humankind.

<sup>44</sup> Large class differentials in mortality rates and life expectancy remain within many industrial societies including Canada, relative differences which in many cases are widening. For a discussion of the role of relative inequality within society upon physical and psycho-social health and in turn life expectancy, see, for example, Robert Evans, 1992. Why Are Some People Healthy and Others Not?, Canadian Inst. for Advanced Research, Working Paper no. 20; and Richard Wilkinson, "Health, redistribution and growth", in A.Glyn, D. Miliband (eds) 1994. Paying for Inequality: The Economic Cost of Social Injustice, IPPR/Rivers Oram Press, London, 24-43.



Government of Maharashtra

# **Child Deaths Evaluation Committee**

**Diagnosis :  
The true magnitude of child mortality and  
malnutrition**

First Report (August 2004)

Life counts.

So, count every birth.

And, account for every death.

## Child Deaths Evaluation Committee, Government of Maharashtra

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# Foreword

Is there a serious problem of child deaths and malnutrition in Maharashtra? If yes, how serious is it? Has the proportion of child deaths and malnutrition reduced as a result of the schemes and programs declared by the government in the last few years? What are the difficulties? What improvements need to be made? The Child Deaths Evaluation Committee was constituted to answer these and other similar questions that were being raised in the state legislature and by society. The committee is expected to submit its report to the government every six months. This is its first report.

Correct diagnosis is essential for the appropriate treatment of any disease. This report focuses on diagnosis. While admitting the relevance of social, economic causes and of education, the committee has avoided going into details of these causes, instead limiting its investigation to the immediate steps that can be taken by the health department. The thermometer (government statistics) measuring child deaths and malnutrition is itself at fault; hence an incorrect measurement has led to the faulty perception that the problem has been solved. Through correct diagnosis, this report looks at the successes and failures of the various attempts made to address the problems of malnutrition and child mortality. This diagnosis should form the baseline on which the problem is measured and addressed.

The diagnosis made in the committee's report stresses the need for solutions. A diagnosis of cancer is not welcome, but without such diagnosis, the search for appropriate solutions will not begin. The goal of preventing the deaths of hundreds of thousands of children has motivated the committee to make this unpopular diagnosis.

Every child death is a life not lived. It is a violation of the fundamental right to life and of the instinct to live. It is the responsibility of the society to save these helpless children. One child death leads to the next. Hence, ignoring one child death is like allowing more children to die. This report is being written with this conviction.

One mistake is repeated often.

"The government knows the exact nature of the problem of child deaths from the sample survey carried out in selective pockets. Then why the stress on recording every child death?" Many have this doubt. Yes, a sample survey does give pointers for policy making. However, it is not enough for managing the problem in the entire state. For treating my son's fever, I have to measure his temperature. A sample temperature measured in the city is not useful. The police department needs information about every murder, not estimates obtained from a survey of the region. Similarly, in order to manage child mortality, the government must know every event of child death. This is the basic difference between a research institute and the health directorate. The health directorate cannot function and

child mortality cannot be checked without recording, reporting and addressing every single child death. Hence the importance of recording every child death.

We hope that this report will be used by the government, people's representatives and the alert society. The committee has studied the events pertaining to the problem of child deaths of the last 6-7 years and the government's response to them. The lethargy and insensitivity of the government in responding to this problem is shocking. The government must be held accountable; unless there are clear signals within the hierarchy that the government is serious, the accountability cannot be established. And this is the government's responsibility to establish accountability.

The committee will discuss in its next report the solutions to decrease child deaths and make its recommendations.

On behalf of the committee, I thank all those who have given us information and helped us to complete this report, especially many journalists, experts and citizens. Many responsible government staff and officers, as well as the chiefs of SRS and NNMB of the central government extended full cooperation. I am thankful to all of them.

Dr. Abhay Bang  
Chairperson

# Some Technical Terms and Their Definitions

- 1 Birth Rate = Number of live children born in a year per 1000 population
- 2 Child Death = Death of a child before it attains the age of 5 years
- 3 Child Mortality Rate (CMR) = Number of deaths of children below the age of 5 years per 1000 live births in that year.
- $$= \frac{\text{\# total child deaths} \times 1000}{\text{\# live births in that year in that population}}$$

Depending on the age of the child at the time of its death, child death can be divided into three components:

- 4 Neonate death = Death of a child from its birth up to 28 days of its age.
- 5 Infant death = Death of a child from its birth up to 1 year of its age.
- 6 Toddler death = Death of a child between 1 to 5 years of its age.

Accordingly, we have three different rates:

- 7 Neonatal Mortality Rate (NMR) = Number of deaths of children from 0-28 days per 1000 live births in that year.
- $$= \frac{\text{\# total child deaths in 0 to 28 days age}}{1000 \times \text{\# live births in that year in that population}}$$
- 8 Infant Mortality Rate (IMR) = Number of deaths of children from 0-365 days (one year) per 1000 live births in that year.
- $$= \frac{\text{\# total child deaths in 0 to 365 days age}}{1000 \times \text{\# live births in that year in that population}}$$
- 9 Toddler Mortality Rate (TMR) = Number of deaths of children between 1 and 5 years of age per 1000 live births in that year.
- $$= \frac{\text{\# total child deaths in 1 to 5 years of age}}{1000 \times \text{\# live births in that year in that population}}$$
- 10 Still Birth = Still Births are those where the foetus dies in the

mothers womb due to illness or infection or dies due to suffocation during birth. These deaths are **not** counted in the CMR but are counted separately.

11 Still Birth Rate (SBR) = 
$$\frac{\text{Number of still births}}{\text{Total births in that year in that population.}} \times 1000$$

12 Perinatal Mortality = Still births + deaths of neonate less than seven days old

**CHART:** Different periods in childhood and the corresponding mortality rates  
(Insert – already in English)

**Note:**

It was not practically possible for the Child Deaths Evaluation Committee to carry out its own studies or surveys. Hence, the committee has referred to other published studies and statistics, and the reference has been mentioned. These studies have their own strengths and limitations. The fact that the committee has referred to these studies does not mean that the committee or its members subscribe to the studies. The estimates drawn from any of these studies are also therefore with their own limitations. The committee wishes to point the reader's attention to these limitations. However, in spite of these limitations, the committee has drawn from these studies because it firmly believes that to wait until correct and actual information is available (which is not possible in reality) will be irresponsible behaviour on the part of the committee, and the committee will fail to respond to the urgency of the situation.

# Executive Summary

## Background :

As announced by the Government of Maharashtra in the state legislature on 12<sup>th</sup> December 2003, the 'Child Deaths Evaluation Committee' was constituted (GR No. BMS/2003/PK 281/2003, KK3, dated 12/12/2003)

## The Scope :

The committee, headed by Dr. Abhay Bang, has 13 members and is charged with the following responsibilities:

1. Assess the problem of child deaths and infant mortality in the state;
2. Review the situation of malnutrition among children in tribal areas.
3. Review all the ongoing schemes aimed at reducing infant and child deaths, maternal deaths and malnutrition; and to give recommendations for their improvement.

The committee is expected to submit its report every six months. However, the health minister has requested that the first report be submitted urgently for immediate action.

## Focus of the First Report

On this background, the committee decided to focus its first report on the magnitude and spread of the problems of child mortality and malnutrition, and on the implementation of decisions taken by the Government of Maharashtra in this regard in December 2001. The second report will review the various schemes and make recommendations to further reduce child deaths and malnutrition. It will also review the actions taken by the state government on the recommendations in the previous report and monitor the effect.

Accordingly, this first report is being submitted. The **report focuses on the extent, importance and causes of child deaths and malnutrition in the state**. It also looks at the **implementation of various decisions earlier taken by the state government for the complete reporting of child deaths**.

## Findings and Conclusions

**Question 1.** What is the total number of child deaths and stillbirths annually occurring in the state?

**Conclusion :** The three state departments of the government of Maharashtra report approximately 25,000 to 40,000 child deaths in the state every year. However, as per the central government (The Sample Registration system, SRS) estimates, this figure must be 120,000, while voluntary agencies have estimated this figure to be around 175,000. Apart from this, there are 22,000 to 66,000 stillbirths annually (these are mostly deaths occurring during delivery and can be prevented). Thus, nearly 140,000 to 240,000 child deaths and stillbirths occur in Maharashtra annually.

**Question 2.** Where do these child deaths occur?

**Conclusion :** The problem of child deaths is statewide. The estimated child deaths in different areas of the state are as follows:

	<b>Infant Mortality Rate</b>	<b>Estimated Child Deaths</b>
Rural Maharashtra	64	82,000
Tribal areas	80	23,500
Urban slums	68	56,000

**Question 3.** Why do children die ?

**Conclusion :** Most child deaths occur because of a combined effect of malnutrition and infectious diseases. 80% of these deaths can be ascribed to deaths in newborn babies, pneumonia and diarrhea. It is possible to take simple and yet effective measures to prevent child deaths from these causes and hence reduce the number of child deaths in Maharashtra.

**Question 4.** What was the improvement in the problem of child deaths in the state in the last few years?

**Conclusion :** The infant mortality rate (IMR) in Maharashtra reduced rapidly during the years 1980 to 1996. However, this reduction in the rate has severely slowed

down in the subsequent years. According to the central government figures (SRS), in the last 7 years, (1996-2002) the IMR has reduced by merely 3 points (from 48 to 45). During the same period, the national IMR reduced by 13.

**Question 5.** How many years will it require for Maharashtra to achieve the declared goal of reducing child deaths?

**Conclusion** : Government of Maharashtra's Population Policy (2000) has laid down the objective of bringing the infant mortality rate down to 25 in the year 2004 and to 15 in the year 2010. It is now 2004, and the infant mortality rate is 45 (as per the lowest estimate) and 66 (as per other estimate), far from the goal of 25. If the rate of reduction in the IMR continues to be the same as in the last ten years, the IMR of 15 can be reached only by 2027 at the earliest and by 2042 at the latest.

**Question 6.** How many child deaths will occur in the state by then ?

**Conclusion** : By maintaining the same rate of reduction in infant mortality, the targeted infant mortality rate of 15 will only be reached by the year 2027 to 2042, i.e., in 23 to 38 more years. Until then, another 16 to 38 lakh children will die in the state.

Unless efforts to reduce child deaths are made on a war footing, a huge number of child deaths can be expected. Therefore, it is necessary to give utmost priority to this problem.

**Question 7.** Does the government receive true and complete information about child deaths ?

**Conclusion** : Though 120,000 to 175,000 child deaths occur in the state annually, only 18 to 28 % of these were being reported by the three departments in the government (1999-2000). The government is kept in dark about the true magnitude of the problem.

**Question 8.** Has the child death reporting improved subsequent to the decisions taken by the state government?

**Conclusion :** In spite of the state government's decision (2001) and assurance given in the legislative house to record 100% child deaths, there is absolutely no improvement in the reporting of infant deaths by the CRS (Civil Registration System) and ICDS in the last 4 years. There is marginal improvement in the MIS (Management Information System) of the health department in 2003-4.

Only 20-40% of the infant deaths are reported even today. Apart from these, the state health department does not compile nearly 30,000 child deaths in the 1-5 years age group.

**Question 9.** To what extent was the government decision to record all child deaths implemented?

**Conclusion :** The government decision to record 100% child deaths has hardly been implemented, since the higher officers involved did not treat this issue as important.

**Question 10.** What did the highest level committee to coordinate the recording of births and deaths in the state do ?

**Conclusion :** The committee had its last meeting on 11<sup>th</sup> September 2000. Since then, in the 3.5 years until March 2004, the committee has not met at all. We have not found any instances of the state coordination committee reviewing any information on child deaths and taking any action. And there might have been nearly 5 lakh child deaths in these 3.5 years.

**Question 11.** Why does the government not know of each and every event of child death?

**Conclusion :** The government machinery reports nearly all births, over-reports still births but under-reports only child deaths, leading us to conclude that there is an effort to selectively hide child deaths.

**Question 12.** What role do the health department's MIS and decision system play in the issue of child deaths?

\*\*\*\*

**Conclusion :** The information system, which is the basis of decisions, generated misleading information and no efforts were made by the concerned officers to correct it. Due to this the government remains in an illusion regarding the situation of child deaths and the data necessary for taking correct decisions is not available. Hence, there is an immediate need to correct the health department's MIS and to ensure complete and correct information on child deaths.

It is a serious failure of the MIS and of the decision makers that child deaths do not get reported and the senior officers accepted for years this incomplete information.

**Question 13.** What is the extent of malnutrition in children in Maharashtra?

**Conclusion :** 7.2% of the children in Maharashtra are severely malnourished. Thus, the state is in the company of undeveloped regions of the country.

**Question 14.** What is the number of malnourished children in Maharashtra?

**Conclusion :** The proportion of severely malnourished children (Grade III & IV) is 5.4% as per the IAP classification, and that of moderately malnourished children (Grade II) is 21.2%. Translated into numbers, this means that nearly 8.15 lakh children in Maharashtra are severely malnourished and 32 lakh children are moderately malnourished. Out of these, 0.6% that is, nearly 1 lakh children are very severely malnourished (Grade IV).

**Question 15.** Is there any improvement in the situation of malnutrition in children in the state?

**Conclusion :** During the period 1975 to 1988, the severity of malnutrition decreased nationally as well as in the state. However, from 1988 until 2002, the proportion of severe malnutrition in Maharashtra has decreased negligibly from (Gomez classification) 7.8% to 7.2%. This is of grave concern. In-depth inquiry and appropriate decisions are needed.

**Question 16.** How correct is the government (ICDS) information about malnutrition?

**Conclusion** : The ICDS reports severe malnutrition 15 times less than reported in the standard information (NNMB). Therefore, there is a serious doubt about the ICDS figures.

**Question 17.** What is the extent of malnutrition in tribal areas?

**Conclusion** : In tribal areas, malnutrition among children is higher, with nearly 15% of the tribal children severely malnourished (Grade III & IV). This figure is double that of the rural Maharashtra.

### **Grave Failure of Duty in the Government**

The government decisions are dependant on the information. Since this information about malnutrition and child deaths was false, the rulers remained under illusion about the reality about child deaths. Those responsible for taking actions did not take any action but pretended to do so creating a false sense of assurance. Today, there are more than a lakh child deaths and 8 lakh severely malnourished children in the state.

The government operates as per the management principle of “Command and Control”. The higher authorities in the health and family welfare department are ultimately responsible for not correcting the flaws in the lower machinery. They accepted this flaw and information, failed to correct it in spite of repeatedly drawing their attention to it, and continued to table wrong information in the assembly and before the government. They also did not adequately implement government’s decision to reduce child deaths.

### **Recommendations**

The need for urgent action is obvious.

1. An accountability system should be introduced in the health and family welfare department, Directorates and the Mantralaya, for correct information on child deaths.
2. The lower levels of the hierarchy receive ideals and orders from the higher up. They must be encouraged by positive methods to collect and provide correct and complete information. Detailed suggestions are given in the report.
3. Detailed recommendations have been made in this report on evaluating the completeness of reporting of child deaths by the health department, (MIS) and CRS, and to compare the information with other parallel sources.

4. There should be a separate all-department committee headed by the Chief Secretary to ensure that each child death is recorded and the implementation of programs to reduce child deaths. This committee should report to the High Court as well as the State Assembly every quarter.
5. Failure in these two duties must be considered a serious offence and such workers and officers should be punished severely.
6. The state government should declare a mission to prevent child deaths and to make 'Child Death Free Maharashtra'. Efforts to reduce child deaths should be undertaken on a war footing and the health department, ICDS, Tribal Welfare and the Women and Child Welfare departments should take up the problem on a priority basis.

The next report will review the government programs to reduce child deaths and the solutions.

# **1. The Importance of the Problem of Child Mortality**

1. Child mortality is a problem of the fundamental right to life, social responsibility and compassion.
2. It is an extremely painful event in the lives of the child's parents and family.
3. Every child death is a loss to the nation's human resource and wealth.
4. With the fear of child deaths, couples give birth to many children. In order to promote family planning, it is necessary to prevent child deaths.
5. Additional children are allowed to be born in order to make up for child deaths. This is a strain and additional burden on the mother's body, mind and health.
6. For the death of every child, there are ten other children who are suffering from severe illness (malnutrition, pneumonia, neonate diseases). Child deaths are thus tip of the iceberg, pointing to the larger problem of other serious diseases affecting children.
7. The children's diseases and child deaths create a financial burden on the government health services and the family.
8. Child deaths are the indicators of the success or failure of the health services and women and child welfare programs.
9. Infant mortality rate is an important indicator of a nation's / society's health. All the developed countries / regions have succeeded in controlling it. It is 3.6 in Japan and 11 in Kerala. It is an important component of the Human Development Index.

The issue of child mortality is a sensitive issue for Maharashtra state. Many newspapers, Doordarshan, political leaders, voluntary organizations and social workers and even sensitive government officers have brought this issue to the forefront, causing debates and discussions on the problem. The government has also responded with the promise to address the problem and announced various schemes for the purpose. It is clear from this that the society and political leadership in Maharashtra wishes to address the problem. The High Court and Hon Chief Justice have also taken cognizance of the issue and thus, ascertained once again Maharashtra's firm commitment the principles of justice.

## 2. Background

1. The State of Maharashtra is a economically, socially and educationally developed state. The State administration is considered efficient. The State's health department has performed well. For example, Maharashtra has done well in controlling polio and in popularizing immunization. According to the Central Government's Sample Registration Survey (SRS), the State's birth rate was 32 in 1971, which has been brought down to 21 in 2000. The Infant Mortality Rate of Maharashtra was 101 in 1971, and has been reduced to 55 by the year 1994. These successes must be credited to the department. However, after 1994, the rate of reduction of the Infant Mortality Rate has reduced, and in the next 10 years, it has reduced by only 10, to stand at 45.
2. On this background, the State Government was correct to set in its population and health policy the goal of reducing the Infant Mortality Rate up to 25 in 2004 and to 15 by 2010. The State of Kerala has succeeded in achieving an Infant Mortality Rate of 11. Maharashtra also has declared its aim to nearly eradicate malnutrition and child deaths.

But some events of past few years throw doubts on this commitment.

3. The State's mindful journalism has published frequent news of the child deaths and malnutrition in adivasi regions of the State in the last 15 years. In 1989, it was Bamni in Dhule district, in 1993, Melghat, and subsequently, Gadchiroli, Nandurbar and Thane were brought into highlight for the numerous deaths of children in these areas. The Chief Ministers – Sharad Pawar, Manohar Joshi and Vilas Dehsmukh, all visited the areas and confirmed the news to be true. They also announced their intention to address malnutrition and child deaths in adivasi regions. The people of Maharashtra welcomed these announcements. Schemes like Navsanjeevan Yojana and Melghat pattern were started.
4. The organization "SEARCH" in Gadchiroli put three questions to the then Chief Minister (1997):
  - Why does the government always learn of the child deaths from newspapers and not from the health department?
  - Have the child deaths in adivasi regions reduced as a result of the various schemes that were announced from time to time?
  - In order to be able to understand this, do the health department or the ICDS inform the government of all child deaths?

Chief Minister Manohar Joshi promised to look into these issues.

5. As per the Government's instruction, the Collector, Gadchiroli, surveyed the Aheri aadivasi block in 1998 for infant deaths, child deaths and still births and compared it with the health department figures of last 5 years (1992-97). It was found that while the infant mortality rate in Aheri was 118, the health department was consistently reporting it as 13.

The report of the Collector, Gadchiroli, had some limitations, yet, it was pointing towards a serious fallacy.

6. Based on the Collector, Gadchiroli's report, the then Leader of Opposition Madhukarrao Pichad and Digvijay Khanwilkar asked questions in the State Legislature, to which the then Chief Minister, Manohar Joshi, responded by promising to take immediate and appropriate steps to reduce malnutrition and child deaths (December 1998).
7. 14 NGOs in Maharashtra came together to study this issue and formed the Child Death Study and Action Group (CDSAG). The group studied the problem over 2 years in 14 different areas covering a total population of 2,27,000 from 231 villages and 6 urban slums, and published its report "Kovli Pangal", in November 2001.

The report estimated that:

- The Infant Mortality Rate was more than 60 in the 3 types of populations that were studied in Maharashtra, viz. rural, urban and aadivasi.
  - More than 2 lakh children must be dying in the State every year.
  - Maharashtra's health department records an Infant Mortality Rate of 13 in its MIS. This is only 30% when compared with the Central Government's Sample Registration Survey (SRS).
  - This hiding of child deaths is grave corruption.
8. The researchers of this report had admitted certain limitations of the study. To overcome these limitations, the researchers analyzed the data using different technique and published an essay in the Economic and Political Weekly in 1992 under the title 'Child Mortality in Maharashtra'. According to this revised estimate, the Infant Mortality Rate of Maharashtra was 66, and the number of children dying annually was 1.75 lakh.
  9. 'Kovli Pangal' created havoc in Maharashtra. There were discussions and debates in newspapers and the State Legislature. The health department disagreed with these estimates. However, in a meeting with the then Chief Minister Vilas Deshmukh, Dy Chief Minister Chagan Bhujbal, Health Minister Digvijay Khanwilkar, Chief Secretary,

Health Secretary, Secretary Family Welfare and the Health Director, the Chief Minister accepted the main points in the report and took the following decisions:

- to record all child deaths (100%) in Maharashtra
- to direct the health department and family welfare department to take the necessary steps to do so
- to implement the 'SEARCH', Gadchiroli pattern to reduce child deaths in 14 districts with immediate effect.

The health department and family welfare departments were charged with the responsibility of implementing these decisions.

10. Accordingly, the mechanism to record 100% births and child deaths was announced in the government resolution dated 12<sup>th</sup> December 2001 (No. xxxx 2001/xxx 1192/21, Manrtalaya, Mumbai 400032). This resolution was issued by the Rural Development Department, with Health and Family Welfare, Women and Child Welfare and Tribal Development Departments.
11. In order to ensure 100% recording of births and deaths in the State, the State Government constituted a State-level coordination committee of senior officials in 1997. The committee was re-constituted in September 2000. The State Health Secretary is the committee's Chairperson, while the Secretary, Family Welfare is its Secretary. The committee has the responsibility to review the births and deaths in the State every six months and take necessary actions.
12. The Commissioner of Census and the Director General, Sample Registration Survey (SRS) have also directed the State Government to address the problem of incomplete recording of child deaths and expressed their willingness to extend help and support to the State Government (2002).
13. In July 2003, during the discussions in the State Legislature on the issue of child deaths in the State, the Women and Child Welfare Minister Dr. Vimal Mundada said that as suggested by Dr. Abhay Bang, the Government has taken all the steps to report and reduce child deaths.
14. Yet, news about child deaths continued. In December 2003, the Opposition Leader Nitin Gadkari and Jogendra Kavade, Hussein Dalwai, Divakar Ravate, Dr. Neelam Gorhe, Dr. Deepak Sawant, Vijay Vadttiwar and other MLAs raised the issue for discussion in the State Legislature. Responding to this discussion, the Health Minister Digvijay Khanwilkar declared that a committee will be constituted to evaluate the situation of child deaths and malnutrition in the State and of the government schemes in this regard (12 December 2003).

This is the context under which this committee has been constituted.

### **3. Scope of Work of the Child Death Evaluation Committee**

As announced by the Government of Maharashtra in the state legislature on 12<sup>th</sup> December 2003, the 'Child Deaths Evaluation Committee' was constituted (GR No. BMS/2003/PK 281/2003, KK3, dated 12/12/2003)

The committee, headed by Dr. Abhay Bang, has 13 members and is charged with the following responsibilities:

1. Assess the problem of child deaths and infant mortality in the state;
2. Review the situation of malnutrition among children in tribal areas.
3. Review all the ongoing schemes aimed at reducing infant and child deaths, maternal deaths and malnutrition; and to give recommendations for their improvement.

**Duration:**

The committee is expected to submit its report every six months. However, the health minister has requested that the first report be submitted urgently for immediate action.

### **4. Questions and References for Evaluation**

To evaluate the problem of child mortality and malnutrition, it was first essential to identify

1. The questions
2. The statistics

on the basis of which, the evaluation could be carried out.

The following questions were taken up for this evaluation:

**A How many child deaths in Maharashtra? Where? Why?**

1. What is the total number of child deaths and stillbirths annually occurring in the state? (Rates and actual figures)
2. Where do these child deaths occur?
3. What are the causes of child deaths? Is it because of malnutrition or disease?

**B Has there been any progress in addressing the problem of child mortality?**

4. What was the improvement in the problem of child deaths in the state in the last few years? (What is the decrease in the rate?)
5. How many years will it require for Maharashtra to achieve the declared goal of reducing child deaths?
6. How many child deaths will occur in the state by then?

**C What are the major difficulties that the government faces in order to understand the problem of child mortality?**

7. Does the government receive true and complete information about all events of child deaths ?
8. Why does the government not learn of all events of child deaths?
9. What is the responsibility of the MIS of the health department in addressing the problem of child mortality?
10. Has the child death reporting improved subsequent to the decisions taken by the state government in 2001?
11. To what extent has this decision to record all child deaths been implemented?
12. What did the highest state-level committee to coordinate the recording of births and deaths in the state do to improve recording of these events?

**D Malnutrition**

13. What is the extent of malnutrition in children in Maharashtra?
14. What is the number of severely malnourished children in Maharashtra?
15. Is there any improvement in the situation of malnutrition in children in the state?
16. How correct is the government (ICDS) information about malnutrition?
17. What is the extent of malnutrition in tribal areas?
18. What is the extent of malnutrition in tribal areas?

**E The diagnosis of the government's problem**

**F Solutions and Recommendations**

## 5. Method

The government has asked the committee to submit its first report quickly. Looking at the time at hand, it is not possible for the committee to conduct surveys and collect information about child deaths and malnutrition on its own, in spite of the committee having a wide scope of work. To find a way around this limitation, the committee decided to make use of the available information of good quality. Apart from this, the committee also visited many areas, and benefited from the information in government reports and statistics as well as discussions with various government officials and staff. Committee members also talked to people outside the government.

- i) The committee met in full force four times, on 8 January (Mumbai), 10 to 11 February (Nagpur), 2 March (Pune) and 11 to 12 August (Mumbai).
- ii) Five regional meetings were also conducted:

20 – 21 January	Nashik
23 – 24 January	Amravati
27 – 28 January	Aurangabad
30 – 31 January	Thane
9 February	Gadchiroli (Nagpur region)

During these regional meetings, the committee members had discussions with

- Government officials (Health and Family Welfare departments, Integrated Child Development Scheme, Collector, District administration).
- People's representatives
- Journalists
- Representatives of local voluntary organizations / NGOs.

(In some meetings, it was not possible to meet with everyone).

- iii) Public Hearings: Public Hearings were held in Dharni (23<sup>rd</sup> January), Amravati (24<sup>th</sup> January), Nashik (20<sup>th</sup> January), Thane (30<sup>th</sup> January) and Aurangabad (28<sup>th</sup> January). In these hearings, citizens, journalists and social workers from the region presented the difficulties and shortcomings of the government programs and records.

- iv) Committee also visited PHCs, sub-centers, Aanganwadi and rural hospitals and had discussions with staff.
- v) Questionnaires were sent to the following senior officers:
  - Additional Director, Family Welfare, Maharashtra government, Pune
  - Director General, Health and Family Welfare, Maharashtra government, Pune
  - Secretary, Family Welfare Department, Maharashtra government, Pune
  - Secretary, Rural Development Department, Mantralaya, Mumbai
  - Commissioner, Integrated Child Development Scheme
- vi) The Vital Statistics Division and Family Welfare Bureau in Pune were visited.
- vii) The statistics, information and reports received from the Health and Family Welfare Department, Maharashtra and Integrated Child Development Scheme were scrutinized.
- viii) Publications / information from the following reputed agencies was also referred:
  - Sample Registration System, Government of India
  - National Nutrition Monitoring Bureau., National Institute of Nutrition, Government of India
  - International Institute of Population Sciences, Mumbai
  - Child Death Study and Action Group, Maharashtra
  - SEARCH, Gadchiroli

## **6. Findings**

### **A How many child deaths in Maharashtra? Where? Why?**

Question 1 What is the total number of child deaths and stillbirths annually occurring in the state? (Rates and actual figures)

- i) There are 3 systems that document child deaths in the State.
  - Civic records of births and deaths (CRS)
  - The MIS of the health department
  - ICDS records

However, there is doubt about the completeness of these systems.

- ii) The State's health department collects information from selected villages under Survey of Cause of Death (SCD) by sampling. However, the selection of villages and the completeness and quality of information are not satisfactory.

The following surveys of reasonable quality are also available:

- iii) National Family Health Survey NFHS – II  
 iv) Sample Registration System (SRS, of the Government of India  
 v) The revised article 'Child Mortality in Maharashtra' based on 'Kovli Pangal' published by the Child Death Study and Action Group in the Economic and Political Weekly in 2002.

Out of these, no single study is complete. Each has something unique and some limitations. After much deliberation, the committee decided to use the statistics of SRS and the revised article of the Child Death Study and Action Group as reference. Both the studies estimate child deaths and still births as follows:

Table 1: Child deaths and still births in Maharashtra: estimates of SRS

Death Rate	1999	2000	2001
Still Births	21,806	22,045	22,165
Still Birth Rate	11.0	11.0	11.0
Infant Deaths	94,10	95,149	89,689
Infant Mortality Rate	48.0	48.0	45.0
Toddler Deaths (deaths in 1-5 years age group)	26,864	27,158	27,306
Total Deaths (0 – 5 years)	1,20,984	1,22,307	1,16,995
Total child deaths and still births	1,42,790	1,44,352	1,39,160

Source: Estimates based on the rates in the Reports of the SRS, Registrar General, Government of India

Table 2: Annual Child Deaths and Still Births in Maharashtra: Estimates of the Child Death Study and Action Group (Average of years 1998-2000)

Death Rate	Annual figures
Still Births	69,484
Still Birth Rate	30.8
Infant Deaths	1,44,113
Infant Mortality Rate	66.2
Toddler Deaths (deaths in 1-5 years age group)	30,912
Total Deaths (0 – 5 years)	1,75,025

Total child deaths and still births	2,44,509
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Source: Child Mortality in Maharashtra, EPW, 2002

Question 2 Where do these child deaths occur?

- i) The news published in the newspapers gives the impression that the problem of child deaths is restricted to some of the adivasi areas. However, according to SRS 2000 of the Central Government, the Infant Mortality Rate of rural Maharashtra is 57. In this same period, the Child Death Study and Action Group also recorded the following rates in 14 different areas:

Table 3: Child Deaths in different population groups in Maharashtra (Child Death Study and Action Group)

Rate	Rural (Non-adivasi) Region	Adivasi Region	Urban slums	Maharashtra State
Still Birth Rate	32.7	28.8	37.9	30.8
Total Still Births	37,279	6,804	22,724	69,484
Infant Mortality Rate	64.2	79.9	68.2	66.2
Total Infant Deaths	70,853	18,274	39,585	144,113
Child Mortality Rate (0-5 years) – CMR	74.3	102.7	96.6	80.4
Total Child Deaths	81,999	23,488	56,069	1,75,025

Source: Child Mortality in Maharashtra, EPW, 2002 – Revised figures.

**Conclusion: The problem of child mortality is State-wide and not restricted to any geographical region. The Infant Mortality Rate (IMR) and annual number of child deaths in different regions of the state is estimated to be:**

**Rural Maharashtra IMR = 64 and total child deaths = 82,000**

**Adivasi regions IMR = 80 and total child deaths = 23,500**

**Urban slums IMR = 68 and total child deaths = 56,000**

- ii) What is the IMR and CMR in adivasi region?
- No reliable statistics are available from the state government, and neither the SRS nor NFHS have separate statistics for the adivasi region.

- a. However, methodical studies carried out by the Child Death Study and Action Group, Ankur project and SEARCH, Gadchiroli in the adivasi region in the last 5 years have collected the following statistics:

Table 4

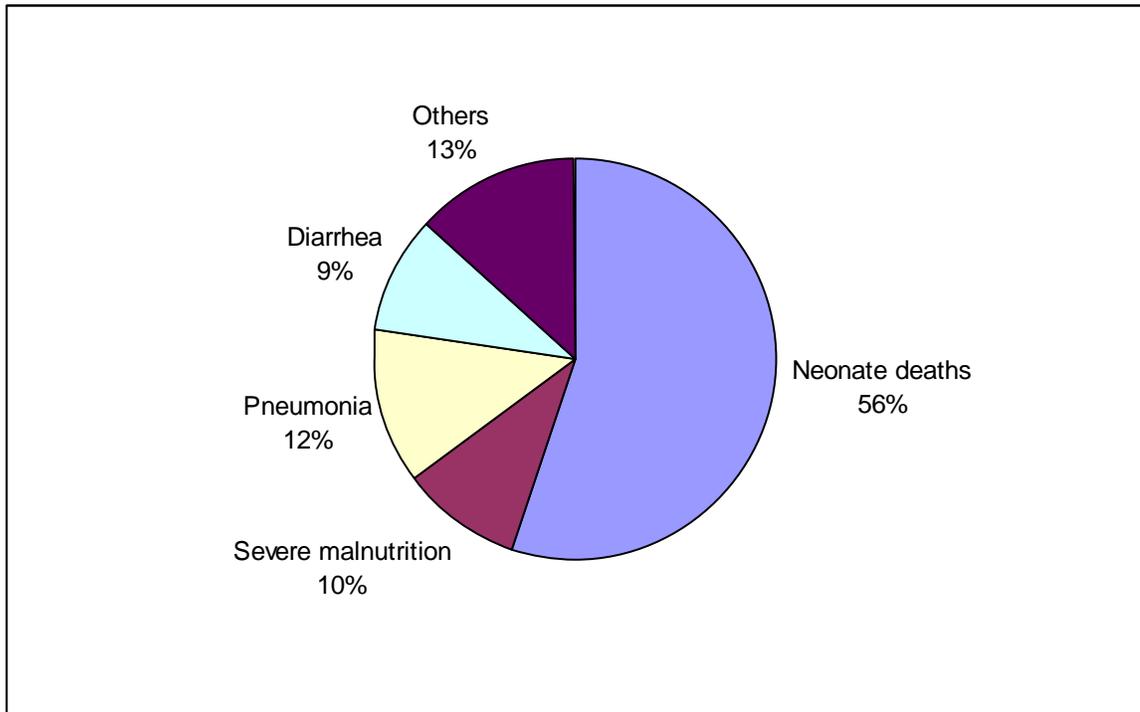
No	NGO	Block	District	Population covered X years	Year	IMR	Toddler Mortality Rate	CMR
1	Aamhi Aamchya Arogyasathi	Korchi	Gadchiroli	10,263 x 5 = 51,315	1998- 2003	84.0	25.3	109.3
2	SEARCH	Dhanora	Gadchiroli	9,067 x 1 = 9,067	2002- 2003	104.5	22.4	126.9
3	KHOJ	Chikhaldara	Amravati	3,290 x 2 = 6,580	1998- 2000	77.3	17.2	94.4
4	Melghat Mitra	Chikhaldara	Amravati	4,533 x 2 = 9,066	1998- 2000	90.7	36.3	126.9
5	Srujan	Pandharkavda	Yavatmal	9,801 x 2 =19,602	1998- 2000	67.3	24.0	91.3
6	Jivhala	Pali	Raigad	4,857 x 2 = 9,714	1998- 2000	79.7	29.0	108.7
	Total			41,811 x 2.3 years = 1,05,344		82.4	26.2	108.6

### Question 3 Why do the child deaths occur?

Every child death has many social, economic, cultural and administrative causes as well as medical reasons. Not getting health services in time is also one of the important reasons. Socio-economic causes cannot be changed instantly and are outside the scope of the health department. Therefore, this analysis is restricted to those medical causes that can be addressed immediately.

No reliable information is available about the medical causes of child deaths from across the State. The causes identified by the Child Death Study and Action Group are as follows:

Figure 1: Causes of Child Deaths



Note: More than one cause can be ascribed to some child deaths, hence the total is more than 100%.

**Some key observations:**

1. Maharashtra has successfully prevented those deaths that can be controlled by immunization, like Tetanus and measles.
2. Neonate deaths are one of the major causes of child deaths. 58% of the total child deaths and 75% of the total infant deaths are neonate deaths.
3. Pneumonia and diarrhea are diseases that can be easily treated.
4. The survey identified severe malnutrition as the major cause of child deaths in 10.4% of child deaths.

**Do children die because of malnutrition or as a result of diseases?** WHO reports that malnutrition is a supportive cause of death in nearly 55% of child deaths. Malnutrition reduces immunity of children, making them easily susceptible to infection (pneumonia, diarrhea). On the other hand, infections makes the children weak, reducing their appetite and thus causing or increasing malnutrition. Malnutrition and infection are thus closely related and form a vicious cycle.

Political leaders avoid attributing malnutrition as the cause of death as it can be interpreted as death from starvation. In reality, malnutrition is not caused only by lack of food, but many other reasons contribute to it. Similarly, child deaths are not caused by malnutrition or infection alone, but by the combined effect of both.

**Conclusion:**

**Most child deaths are caused by the combined effect of malnutrition and diseases caused by infection. Nearly 80% of the child deaths in the State are caused by pneumonia, diarrhea and malnutrition. These 3 diseases can be easily treated and hence, it is possible to prevent child deaths caused by these 3 causes.**

## **B Has there been any progress in addressing the problem of child mortality?**

Question 4 What was the improvement in the problem of child deaths in the state in the last few years?

The SRS (Central Government) has published its statistics for the period until 2002. From this statistics, it can be seen that:

- a. IMR of India was 114 in 1980 and it has come down to 65 in 2002, a reduction of 49 in 22 years.
- b. In comparison, the IMR of Maharashtra has been brought down from 75 to 45, a reduction of 30 in 22 years.
- c. However, if we look at the last 3 years, the IMR of India has come down from 77 to 64, a reduction of 13, whereas that of Maharashtra has come down from 48 in 1996 to 45 in 2002, a reduction of merely 3 (Refer figure 2).

Figure 2: Progress in reducing IMR in Maharashtra and India (SRS)

Insert figure

Source: Reports of the SRS, Registrar General of India

The rate of reduction of IMR has slowed down considerably. There are two reasons. Firstly, it is becoming increasingly difficult to reduce death rate. Secondly, 75% of the infant deaths are during the neonate period. The health department has no specific program to reduce the deaths in this age group as of

now. Hence, the existing programs (immunization, nutrition program) do not affect the remaining infant deaths. That the rate of reduction of infant deaths is lower than the national rate is indeed a matter of concern.

**Conclusion: Though the IMR of Maharashtra reduced speedily from 1980 to 1996, the rate of reduction has slowed down considerably. According to the SRS, it has reduced by 3 from 48 to 45 in the last 7 years, while the national rate has reduced from 13.**

Question 5 How many years will it require for Maharashtra to achieve the declared goal of reducing child deaths?

- i) According to Maharashtra's Population policy, the state government aims to reduce IMR to 25 in 2004 and to 15 by 2010. This is a realistic aim.
- ii) A look at the last few years tells us that according to the SRS figures, IMR of Maharashtra in 1994 and 1995 was 55, and it was brought down to 45 in 2001. By this same rate, the IMR will reduce to 15 by 2027.

Figure 3: Projected decline in the IMR based on SRS and CDSAG estimates in Maharashtra

Insert figure

However, reduction in IMR in the later stages is a difficult task, and so, the rate of reduction is expected to decline. By this calculation, and considering that the rate of reduction of IMR has reduced considerably in the last 7 years, it may take more than 23 years to bring the IMR down to 15.

- iii) According to the Child Death Study and Action Group, the IMR in 2000 was 66. Accepting this figure and the rate of reduction in IMR in last 10 years as estimated by SRS, it is easy to calculate that the IMR will be 15 in year 2042, i.e. 38 years from now (Figure 3).

So, to achieve Maharashtra's targeted goal of IMR, it will take from 23 to 38 years.

Question 6 How many child deaths will occur in the state by then?

By this rate, until the IMR is brought down to 15, there will be these many deaths:

1. As per SRS estimates, 16,68,396 until the year 2027.

2. As per the Child Death Study and Action Group, 38,45,464 until the year 2042.

**Conclusion: Maharashtra cannot achieve the targeted IMR of 15 by year 2010 if the IMR continues to decrease with the same rate, but can achieve it by year 2027 to 2042, that is, in another 23 to 38 years. Until then, there will be another 16 to 38 lakh child deaths.**

**Unless this issue is given utmost priority and is addressed on a war footing, Maharashtra will record child deaths on a large scale.**

### **C What are the major difficulties that the government faces in order to understand the problem of child mortality?**

To address any problem (eg poverty, unemployment or AIDS), the government needs to understand its scale and its location completely and correctly. Without this information, the decision makers in the government do not understand its seriousness, cannot give it the necessary priority nor find the appropriate solutions. Also, the solutions that are implemented cannot be evaluated or managed.

For the problem of child deaths, the State Government cannot depend on the SRS or similar sample surveys, because:

- SRS collects information from nearly 3 lakh population in the State on a sample basis. This information can be used to estimate the problem at the State level, but cannot be used for management of the problem. In order to control the health programs and to address the problem of child deaths, the State Government needs information of all the child deaths from each village, Primary Health Center and district. The SRS does not give such information.
- The complete information from SRS becomes available only after 3 to 5 years. For an efficient administration, the State Government should have information immediately, within a month.

That is why the health department and ICDS use an independent MIS, which generates information about births, child deaths and other information for health management in the State every month through the reports sent by the health staff.

**MIS is the eyes and ears of the health department. Unless it is functioning smoothly and correctly, the government will be deprived of necessary information.**

Question 7 Does the government receive true and complete information about all events of child deaths?

Three State-wide information systems are operational to report to the State on child deaths. These systems are expected to document and report every birth and death, not by sampling method but by covering the entire State.

1. MIS of the health department
2. ICDS records
3. Civic records of births and deaths recorded under the Birth-Death Records Act (CRS)

These three systems have reported the births, infant deaths and toddler deaths as follows:

Table 5: Births and Deaths reported by the State Government in 1999-2000

Type of Information	Health Department MIS	ICDS	CRS
No. of infant deaths	25,646	20,673	27,322
No. of toddler deaths (1 to 5 years)	-	10,318	7,121
Total child deaths reported	25,646 (?)	30,991	34,443

This committee was informed that the MIS of the health department compiles information of infant deaths and not toddler deaths at the State level. Thus, the health department remains unaware of the toddler deaths in the State. Why the information is not compiled when it is collected remains unclear.

i) Comparison between the State Government’s information with that of the Child Death Study and Action Group and the SRS (1999-2000)\* gives a picture about the completeness of the State Government’s information.

Table 6: Completeness of the Government’s Information (1999-2000)\*

Type of Information	Completeness of the information when compared with SRS (%)			Completeness of the information when compared with Child Death Study Group (%)		
	Health Department MIS	ICDS	CRS	Health Department MIS	ICDS	CRS
Infant Deaths	27.2	22.0	29.0	19.8	15.9	21.0
Toddler deaths (1 to 4 years) <sup>Y</sup>	-	31.0	26.5	-	26.0	25.6
Total deaths under 5 years age <sup>Y</sup>	-	24.3	28.5	-	18.3	21.8

- \* The CRS information is for the period Jan to Dec 1999, and that of health department and ICDS is for the period April 1999 to March 2000.
- <sup>Y</sup> ICDS records this information for 0 to 6 years. The figures given here have been adapted for the specific age group.

Question 8 Has the child death reporting improved subsequent to the decisions taken by the state government in 2001?

On this background, the committee reviewed the decision taken by the State Government in December 2001 to record and report 100% child deaths, the actions taken and progress made. Based on the information given by the concerned departments, the following observations were made:

A. Health Department.

- i. Is there an improvement in the reporting and documentation of infant deaths in the MIS of the health department?

Table 7

Year	Infant Deaths	% reported in comparison with SRS
2000-2001	31,987	33.6
2001-2002	32,271	36.0
2002-2003	28,976	31.6
2003-2004	39,527	42.3

From the above figures, it can be observed that there is no improvement up to year 2002-2003, but some improvement in 2003-2004. This is appreciable. However, a closer look reveals that this improvement is restricted to Mumbai and Pune municipal areas and is not across the State.

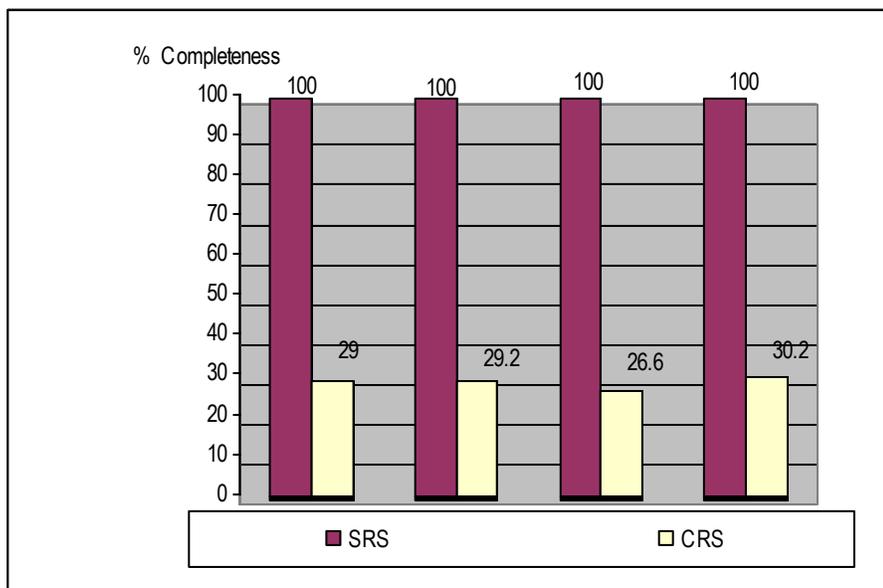
- ii. Is there an improvement in the reporting and documentation of child deaths in the 1-5 year age group?

The Family Welfare department reported that the MIS information of the 1-4 year age group child deaths are not compiled at the State level, but only in those blocks where the Navsanjeevan Scheme is implemented. In these blocks, 2604 child deaths in year 2002-03 and 2896 child deaths in 2003-04 were recorded. Thus, there was an improvement of only 10% in those blocks which face a serious problem of child deaths.

- B. Is there an improvement in the reporting and documentation of child deaths in the CRS?

Comparison between the reporting of infant deaths in CRS in the last 4 years with that of SRS (CRS information is available only up to 2002)

Figure 4: Completeness of infant deaths registration in CRS in comparison to SRS estimates



Source: a. SRS Report Bulletin, RGI, India. b. Vital Statistics Division, Department of Health & Family Welfare, Government of Maharashtra.

C. Is there an improvement in the reporting and documentation of child deaths in the ICDS in the last 4 years?

i. ICDS Information pertaining to infant and child deaths

ICDS recorded IMR 32 in year 2003 and 31 in year 2003, a figure that appears to be more complete in comparison with that of CRS and MIS.

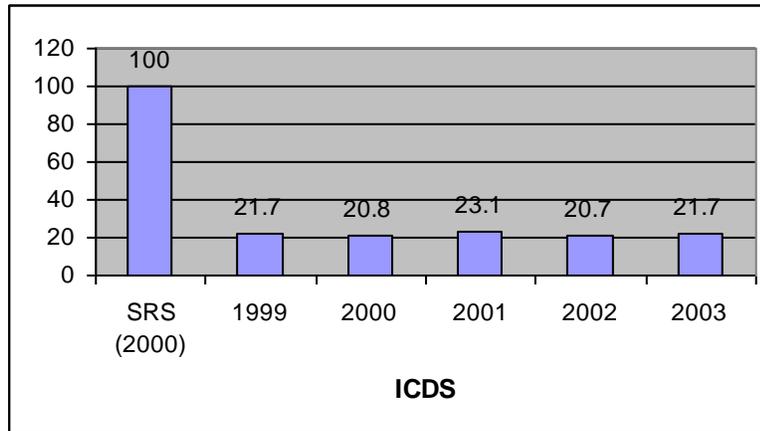
Total infant deaths recorded by ICDS in the State

Year	Infant Deaths
1999	20,673
2000	19,798
2001	21,963
2002	19,679
2003	20,612

However, these figures are less than those reported by the health department. One reason is that ICDS does not cover the entire population in the State. Another reason is that ICDS does not record births completely. These are 6,74,223 (According to SRS, there are 19 to 20 lakh births in the State annually). The IMR reported by ICDS appears to be falsely higher since live births have been under reported ( $IMR = \text{No. of events of infant deaths} \times 1000 / \text{live births}$ ). In reality, the total infant deaths recorded by the ICDS (20,000 to 21,000) are 22% of the infant deaths estimated by the SRS (90,000). The lower population surveyed by the ICDS also does not explain this incompleteness.

ii. The progress reported by ICDS when compared with SRS (Figure 5)

Figure 5: Comparison with SRS – Progress made by ICDS in recording infant deaths



**Conclusion: There is no improvement in the CRS and ICDS systems in the last 4 years and little improvement of the health department's MIS in 2003-04 in spite of the assurance given by the State Government to document 100% child deaths in the State Legislature.**

Question 9 To what extent has this decision to record all child deaths been implemented?

1. The law directs the Central Government (1969) and State Government to record all child deaths (1969). The Director General of SRS and the Census Commissioner have repeatedly correspondence with the government to ensure completing recording of child deaths. What action was taken as per the government decision (Rural Development Department, Health and Family Welfare Department and Tribal Development Department) of 12th December 2001 to know all child deaths?

Many district officials were unaware of this directive.

In most cases, the block and district committees did not meet or met irregularly.

As per the government's report, out of the quarterly review meetings conducted by the District Collector and the Chief Executive Officer, Zilla Parishad, reports regarding child deaths were submitted in 42% of the meetings in 2002 and 40% in 2003.

2. In the district and divisional review meetings of government programs, the health department officials of the presiding officers do not give priority to the recording and reporting of child deaths.

3. Only two health programs are reviewed seriously: family planning and immunization. The staff in the lower hierarchy gives priority to only those programs that are taken seriously by the senior officers.

**Conclusion: The directive to record 100% child deaths has been implemented very poorly, since the senior officers do not take this problem seriously.**

Question 10 What did the highest state-level committee to coordinate the recording of births and deaths in the state do to improve recording of these events?

- A) On 2<sup>nd</sup> September 2000, the Maharashtra government re-constituted a inter-departmental coordination committee of its public health department (GR No. xxx 2000/355/ CR 109 / xxx 3) to record births and deaths and other vital statistics.

The committee was charged with improving the quality and completeness of recording births and deaths.

In the same GR, the following directive has been given with regards to the scope of the committee:

“The committee’s main duty is to ensure 100% recording of births and deaths in the State and to take the necessary action, to involve the local health staff in this task as in other states, to organize the rural registration offices for this purpose and to identify the lacunae as well as limitations of the present system and make recommendations to the government. The committee should meet twice in an year and the committee will be in existence permanently.”

The State Health Secretary is the ex-officio Chairperson and the Family Welfare Secretary, its ex-officio Secretary of the committee. Thus, this State-level apex committee is constituted of senior responsible officers from the health department and other departments to address the issue of 100% documentation of births and deaths. The committee should be meeting in every six months.

**Conclusion: The last meeting of the committee was on 11 September 2000. From then until March 2004, in the 3.5 years in between, the committee has**

**not met at all. We did not come across any records of the committee having reviewed the births and deaths records during this period.**

Question 11 Why does the government not learn of all events of child deaths?

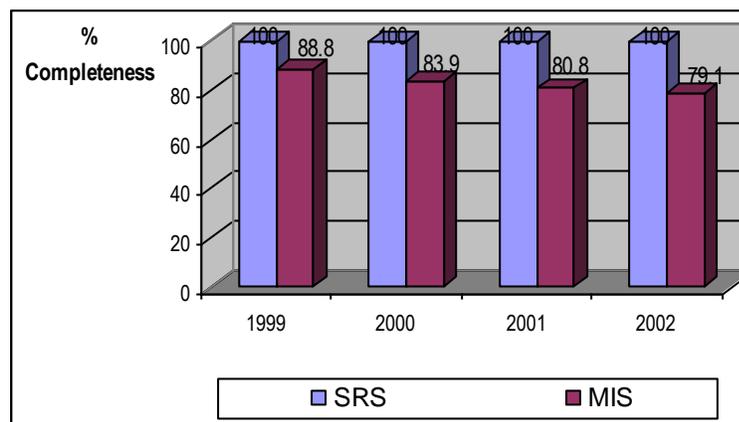
(This has been discussed by Dr. Panse in his report submitted to the committee).

The committee has found the following reasons:

1. The child deaths are purposefully not brought into light.

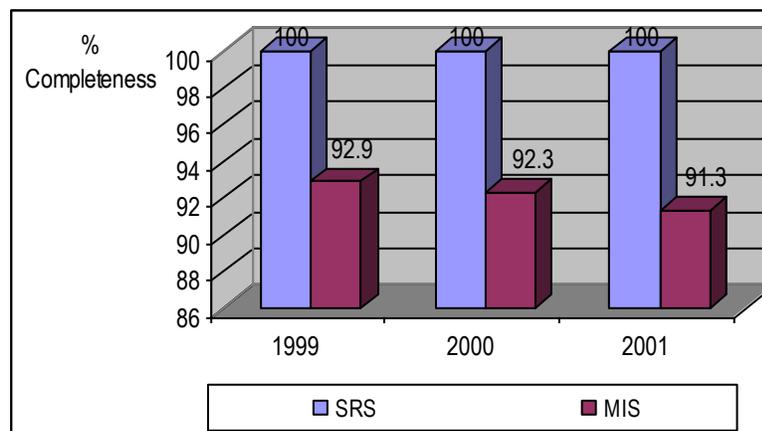
- i) In the last 4 years when only 20 to 35% of the child deaths were being recorded, the MIS of the health system and CRS has succeeded in recording all (100%) births (Figures 6 & 7).

Figure 6: Completeness of Birth Records of the Health Department's MIS in comparison with SRS.



Source: SRS Reports + Dy Director, Health & Family Welfare (MIS) Maharashtra

Figure 7: Completeness of Birth Records of CRS in comparison with SRS



Source: SRS Reports + Dy Director, Health & Family Welfare (MIS) Maharashtra

- ii) The natural flow of events is Pregnancy → Birth → Childhood → Child death → Growth of remaining children. The records needed for other programs of the health department and ICDS staff, such as the list of pregnant women for the mother and child care program, records of births, list of children for immunization purpose are available with the aanganwadi worker and the ANM, and these lists are almost complete. However, child deaths are not recorded. This clearly indicates that the staff avoid recording and reporting child deaths.
- iii) The figures of still births further strengthen this argument. According to SRS, Maharashtra's IMR is 45 and the still birth rate is 10. The health department gives the following figures of still births:

Year	Still births SRS	Still births MIS (Health Department)	SRS in comparison with MIS
1999-2000	21,806	25,494	121%
2000-2001	22,045	40,243	182%
2001-2002	22,165	31,253	141%
2002-2003	22,633	25,329	120%

According to SRS, number of infant deaths is 4.5 times the number of still births. However, the average number of infant deaths recorded by the MIS in the last 4 years is 29,720, while the still births are 30,829. The Child Death Study and Action Group estimated still births to be 69,484.

This clearly indicates that the health staff either record an infant death as still birth or record still births but do not record all infant deaths.

**Conclusion: Recording nearly all births, reporting higher number of still births but lower number of child deaths is all indicative of the**

**conclusion that the government machinery tries to selectively hide child deaths.**

2. Fear amongst junior staff,

- i) The junior staff in the health department and ICDS is fearful of reprimand or investigation in case of reporting a child death. Not reporting a child death, however, is accepted by the senior officers without any question. In this situation, the staff naturally takes the pragmatic decision not to report child deaths. The blame lies with the system and the environment and not the staff.
- ii) The officers at the middle level (Medical Officer, District Health Officer) find it safe to report a few child deaths from their jurisdiction. They think it unsafe to report more child deaths than reported earlier.

**Conclusion: Senior officers at the province level are aware that their information of child deaths is incomplete when compared with that of SRS and Child Death Study and Action Group. They are also aware that in spite of written or oral instructions given by them, their staff does not report all the child deaths. Even so,**

- a. They have not thought of changing this situation.**
- b. They have not refused to accept incomplete reports and threatened to take action.**
- c. They have never taken this issue seriously.**

This behavior cannot be understood. The committee sought answers to specific questions from these officers three times, and every time, no answers were given. The questions from some of the committee members were not given satisfactory and complete answers. They have not been able to justify their non-action. The most obvious reason seems that the issue of child deaths is not taken seriously.

3. No priority to the issue of child mortality

The health department MIS and in all the review meetings and evaluation, only two programs - family planning and immunization are given priority. No attention is given to the incompleteness of records of child deaths since it is not a priority issue.

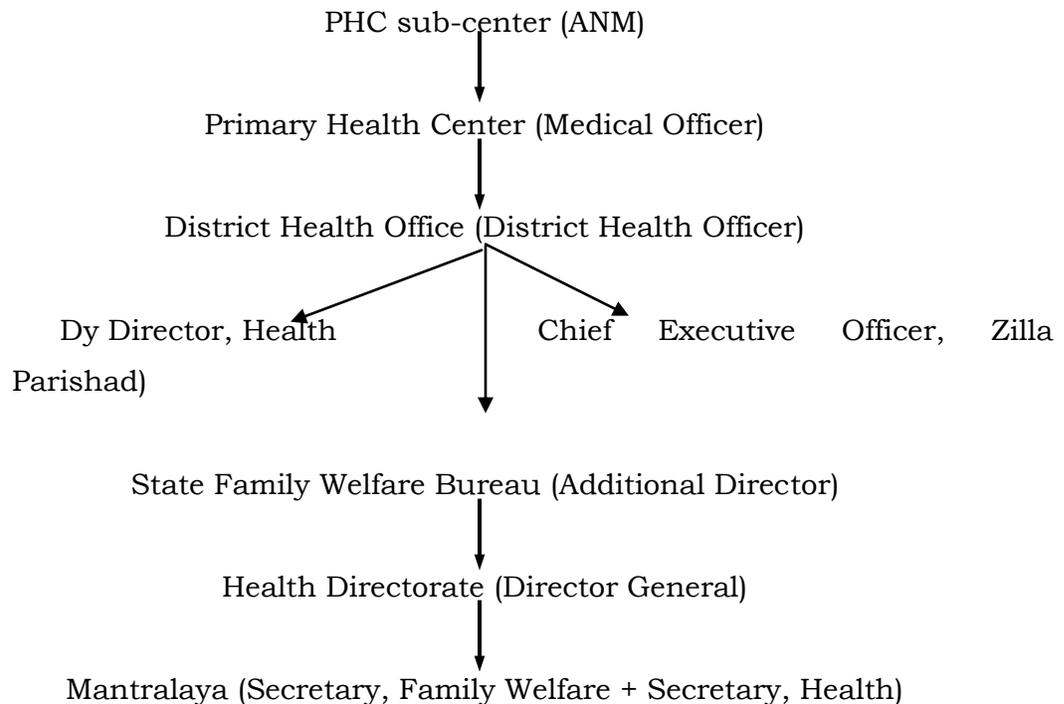
4. There is no mechanism to get information about child deaths from urban areas, private hospitals and doctors. Therefore, many child deaths are not recorded.
5. Unfilled posts or absenteeism of the staff reporting child deaths (such as Gram Sevak, ANM).
6. The door to door survey carried out by the ICDS every quarter is an excellent opportunity to find all child deaths. However, the survey does not give priority to child deaths, nor are questions pertaining to child deaths included in the questionnaire.
7. There is no answer to the present attitude of the departments – “Why record child deaths? What is the use?” The individual reporting child death should be encouraged and failure to report should be punished. Today, the situation is exactly opposite.
8. No coordination between the 3 systems that record child deaths.
9. No support is sought from those likely to know the death of a child (traditional birth attendant, village head, active members of women’s groups, members of the village Panchayat, police patil etc).
10. There is confusion in the minds of the staff about using the de-facto (all child deaths that have occurred in the village, including the death of the mother’s child who has come to her maternal home for her delivery) and de-jure method (the death of a child whose mother is a permanent resident of the village) to record child deaths. CRS uses the de facto method while the health department and ICDS use the de jure method. The methods being different, it is easy to conveniently ‘exclude’ some child deaths.

Question 12 What is the responsibility of the MIS of the health department in addressing the problem of child mortality?

The MIS of the health department is an independent subject in itself. However, looking at the inefficiency of the system to record child deaths and to take necessary action, the committee thinks it necessary to make some suggestions.

The MIS of the health department is like the body’s nervous system, essential to ensure the control and coordination of the health services in the entire State. When the nerve cells get a disease like leprosy, the body becomes insensitive to pain and starts losing the fingers. The nerve cells are unable to pass the message for movement to the limbs, causing paralysis.

1. The MIS starts from the monthly report of the ANM from the PHC sub-center. The information flows in the following manner (Figure 8):



2. This information has four features:

- The health staff loses a lot of their time. The ANM has the responsibility of maintaining 17 registers, and more than 2000 columns in her monthly report. She spends 20% of her time in collecting this information and then writing reports.
- The quality of this information has a lot to be desired. The example of child death record is ample proof.
- The local staff (PHC, MO, DHO) do not analyze this information nor do they take any decision or action based on this information.
- At the State level, the Directorate or the Mantralaya do not insist on the truthfulness of this information, nor do they use this information to take any appropriate and immediate administrative decisions.

This huge exercise has become a meaningless but regular exercise to collect incorrect information. It also means that decisions of the health and family welfare departments cannot be based on this information.

The State's health minister had assured the State Legislature that he would take a review of the child deaths records along with the various departmental Secretaries. The committee has not come across any such review.

**Conclusion: Correct information on the basis on which appropriate decisions can be taken is not available with the government, since the MIS produces faulty data, and the concerned officials make no attempt to correct this faulty system. There is an urgent need to improve the health department's MIS and thus, the records of child deaths.**

## D Malnutrition

Question 13 What is the extent of malnutrition in children in Maharashtra?

- i) There are 3 accepted and popular methods to measure malnutrition based on the child's weight:
  - a. Gomez classification: Mild, Moderate and Severe malnutrition.
  - b. Indian Academy of Pediatrics (IAP) Classification: Grade I and II. Grade III & IV (Severe malnutrition). ICDS uses this method.
  - c. Standard Deviation method.
- ii) The following sources provide information about malnutrition in Maharashtra:
  - a. National Nutrition Monitoring Bureau (NNMB)
  - b. National Family Health Survey (NFHS – II)
  - c. ICDS
- iii) The surveys of NNMB are organized by the National Nutrition Institute of the Government of India and are accepted for their quality. According to the latest survey carried out by NNMB in Maharashtra as per the Gomez classification, the extent of malnutrition in 1-5 year age group children is as follows.

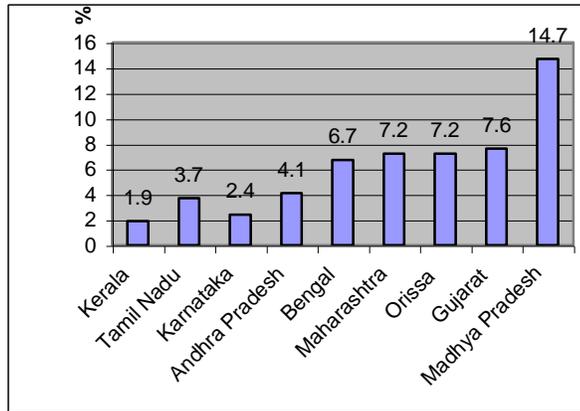
Table 9: Malnutrition in Rural Maharashtra (NNMB 2002)

<b>Type (Gomez)</b>	<b>%</b>
Normal	8.2%
Mild malnutrition	39.6%
Moderate malnutrition	45.0%
Severe malnutrition	7.2%

Source: NNMB Report (2002).

- iv) The same survey also reports on severe malnutrition (weight less than 60% of normal weight) in other states:

Figure 9: Severe malnutrition in different States (NNMB 2002)



(NNMB – 2002, table 54.1)

As compared to the southern states, the condition of Maharashtra is poor. That it is comparable to that of Orissa is to be regretted.

- v) The NFHS – II survey carried out in the country that uses a different method of classification (median – SD) reports the extent of malnutrition in the 0-3 years age group of children in Maharashtra as follows:

	Maharashtra	India
Severe malnutrition (-3 SD)	17.6%	18.0%
Moderate malnutrition (-2 SD)	49.6%	47.0%

An economically developed State like Maharashtra has the same moderate and severe malnutrition as the national average. Maharashtra follows the ‘BIMARU’ states like Bihar, Madhya Pradesh, Rajasthan, Orissa and Uttar Pradesh (NFHS – II table 7.17)

**Conclusion: 7.2% of the children in Maharashtra are severely malnourished, a figure that puts Maharashtra in line with other undeveloped regions of the country.**

Question 14 What is the number of severely malnourished children in Maharashtra?

According to the NNMB report, the number of severely malnourished children in Maharashtra varies depending on the classification method, since the definition of severe malnutrition changes with the type of classification.

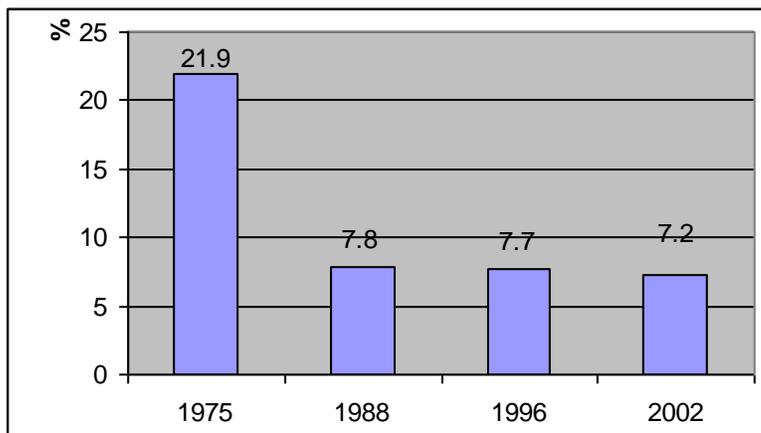
- 3 SD method 23.2%
- Gomez classification 7.2%
- IAP classification 5.4%

If we consider the lowest figure in the above table, the number of severely malnourished children (Grade 3+4) in Maharashtra, out of the 1.5 crore children in the 0-6 year age group, must be 8,15,041 (IAP figure of 5.4%, also used by ICDS). The number of moderately malnourished children (Grade II) must be 32 lakh and that of most severely malnourished children (Grade IV) – 1 lakh (0.6%).

Question 15 Is there any improvement in the situation of malnutrition in children in the state?

According to the 4 surveys carried out by NNMB in the last 27 years, the extent of severely malnourished children in Maharashtra is as follows:

Figure 10: Extent of severe malnutrition in children in Maharashtra (Gomez) (NNMB)



Source: NNMB Reports

**Conclusion: The period between 1975 and 1988 saw a decline in the levels of severe malnutrition in the country and the State. However, in the 14 year period between 1988 to 2002, severe malnutrition in Maharashtra reduced negligibly from 7.8% to 7.2%. This is a matter of grave concern.**

Question 16 How correct is the government (ICDS) information about malnutrition?

- i) According to the reports presented by ICDS, 48 lakh children have been enrolled in nearly 62,752 anganwadis in the State, benefiting 36 lakh children under the scheme.
- ii) ICDS adopts the IAP method of measuring malnutrition using the weight of the child. In November 2003, the extent of malnutrition was measured in 60 lakh children in the State, and the following grades were obtained:

Table 10: ICDS Figures.

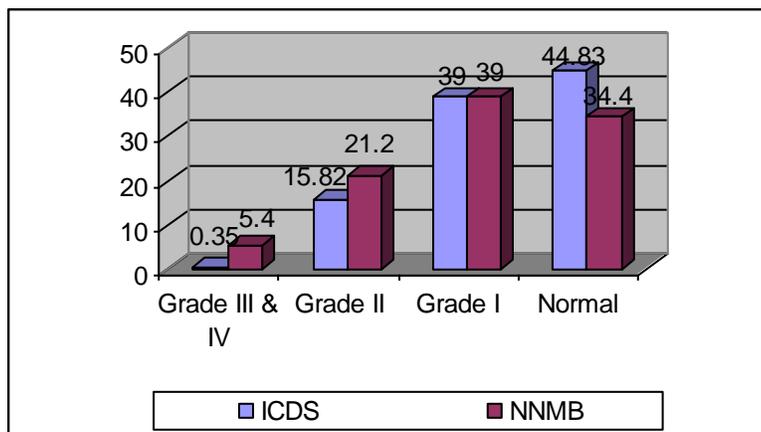
<b>Malnutrition Grades (IAP)</b>	<b>%</b>	<b>Number of children</b>
Normal	44.84%	27,15,690
Grade I	39.00%	23,62,659
Grade II	15.82%	9,58,507
Grade III & IV (Severe malnutrition)	0.35%	21,564

iii) The figures provided by ICDS appear to be very low. To check the reliability of these figures, NNMB carried out a survey using the same IAP classification in year 2002 among children between the age 6 months to 6 years. The findings were as follows:

Table 11: Comparison between NNMB malnutrition figures with that of ICDS Maharashtra.

<b>Malnutrition Grade (IAP)</b>	<b>ICDS (Maharashtra)</b>	<b>NNMB (Maharashtra)</b>
Normal	44.83%	34.4%
Grade I	39.00%	29.0%
Grade II	15.82%	21.2%
Grade III & IV (Severe malnutrition)	0.35%	5.4%

Figure 11: Comparison between malnutrition reported by ICDS and NNMB (2002)



IAP Grading

When compared with the NNMB survey, it can be observed that ICDS reports severe malnutrition at 0.35% nearly 15 times less than that reported by ICDS

(5.4%). The Grade II percentage is also under reported. Some difference may be attributed to the sample size of the NNMB survey and range ; however, the difference of 15 times certainly raises questions about the reliability of the ICDS figures.

**Conclusion: ICDS figures for severe malnutrition are 15 times lower than the standard, giving scope to doubt the credibility of the ICDS figures.**

Question 17 What is the extent of malnutrition in adivasi areas?

The committee looked for information to answer this question. NFHS figures for Maharashtra do not give separate information for adivasi areas. From the study carried out by Arun Bhatia of the Tribal Research Institute, Government of Maharashtra and the news of malnutrition and child deaths from various adivasi areas, the extent of malnutrition must be higher in adivasi areas than the State average. The NNMB sample survey (NNMB, Technical Report No 19, 2000) found the extent of malnutrition in adivasi areas as follows (Table 12 & 13).

Table 12: Extent of malnutrition in adivasi children in Maharashtra (1-5 years) (Gomez classification, NNMB 2000)

Grade (Gomez)	% adivasi children	% in Rural Maharashtra (For comparison)
Normal	2.9	8.2
Mild malnutrition (1)	23.5	39.6
Moderate malnutrition (2)	58.8	45.0
Severe malnutrition (3)	14.8	7.2

Table 13: Malnutrition in adivasi children (1 to 5 years) (SD method, NNMB 2000)

Grade	No of Adivasi children (%)
Weight above 2 SD	17.0
Weight between 2 SD and 3 SD	40.0
Weight below 3 SD	43.0

**Conclusions regarding malnutrition:**

- 1. As per IAP definition, the percentage of children in Maharashtra who are severely malnourished (Grade III & IV) is 5.4% and those moderately malnourished (Grade II) is 21.2%. This means that nearly 8,15,000 children are severely malnourished and 32 lakh children are moderately malnourished. And 1 lakh children (0.6%) are very severely malnourished (Grade IV).**
- 2. Maharashtra falls in the list of undeveloped States as far as severe malnutrition is considered.**
- 3. There is no improvement in severe malnutrition in the last 14 years.**
- 4. ICDS reports 15% times less severe malnutrition, making its figures unreliable.**
- 5. The extent of severe malnutrition among adivasi children is high, with nearly 15% adivasi children being severely malnourished (Grade III & IV). This is twice the percentage of severely malnourished children in rural Maharashtra.**
- 6. The extent of malnutrition in Maharashtra has not reduced in the 14 year period between 1988 to 2002. The reasons for this need to be investigated.**

Question 18 What causes malnutrition?

Malnutrition has many causes, including poverty, lack of food and employment, illiteracy, repeated infections, malnourished and sick mother, lack of health services and so on. Therefore, to address malnutrition, wide range of actions are required. It is expected that the ICDS and health department address some of the critical issues such as nutrition for the pregnant and lactating woman, iron tablets, health education, nutrition to the children, immunization, treatment of the sick child etc. Many experiments such as the Narangwal experiment and the INCAP experiment have demonstrated that malnutrition and child deaths can be reduced by supplementary nutrition coupled with health services. However, such positive effect cannot be observed in Maharashtra; the reasons need to be investigated.

## 7. Grave Failure of Duty in the Government

One of the major findings of this study is that the senior officers in this democratic government have behaved in an irresponsible manner and should be held accountable for the more than one lakh children dying in the State annually.

- i) The three independent government systems of recording child deaths (MIS, CRS and SRS) are directed by and in fact converge in the Health and Family Welfare Directorate. In spite of 70% under reporting of child deaths in the MIS and CRS when compared to the SRS (Central Government) for many years, and knowing of this under reporting, the Health and Family Welfare Directorate made no efforts to improve the reporting even.
- ii) Action was avoided under the feeble reason that 'child deaths occur not because of malnutrition but as a result of other diseases'. In reality, malnutrition is a cause in most (55% as per WHO) child deaths. And the responsibility of preventing the 'other diseases' (such as pneumonia, malaria, diarrhea and neonate diseases) that cause child deaths lies with the health department.
- iii) The directives given by the Nagpur bench of the High Court to reduce malnutrition and child deaths in adivasi areas have not been implemented in totality.
- iv) Chief Minister Vilas Deshmukh announced in December 2000 that the 'SEARCH' pattern to reduce child mortality will be implemented in the entire State. On 5 December 2001, the Chief Minister and Health Minister took the decision to implement the 'SEARCH' pattern in 14 districts. In spite of these decisions, no step was taken in the last 3 years to implement these decisions. According to the latest information, this decision was implemented in 5 blocks, but the results are yet to be implemented.
  - The Chief Minister's decision (December 2001) was not implemented.
  - The Chief Minister's suggestions (letter June 2002) to review the decisions and the implementation were ignored.
- v) The inter-departmental coordination committee of senior officials with the ultimate responsibility of review and action for ensuring 100% recording of child deaths did not meet even once in 3.5 years during the period when there were repeated news in the media and the topic of child deaths was being discussed in the State and the State Legislature (September 2000 to March 2004).

vi) The Health Minister ignored the evidence given by the media, NGOs and opposition leaders of the incorrect information presented by his officers and instead of investigating, defended this incorrect information. In spite of giving repeated assurances, no action was taken.

The health department has demonstrated with its family planning and immunization programs that if it has the will, it can indeed implement programs effectively. The same officers who are aware and active in pursuing the priorities given by international organizations (family planning, pulse polio, AIDS) fail to act in the case of child deaths for 3 years and think it easy to fool the entire State and its government by denying the existence of the problem and their responsibility to address it.

These are all signs of the grave disease that has struck the administration. As a result, more than 1 lakh children continue to die since last 4 years.

## 8. Solutions and Recommendations

1. To solve any problem, it must be first measured to understand its extent and severity. By measuring it, one not only understands its priority, but also, there is a basis for the solutions. The impact of the solutions can also be measured and evaluated. The rule can be applied to any problem – poverty, rape, AIDS, SARS. The fever must be diagnosed correctly and the thermometer used to measure the temperature must also be correct.

The first step to control and reduce child deaths is to record *all* (100%) child deaths.

2. The Civil Registration System 1969 Act puts the responsibility of reporting births and deaths on the citizens. The death of an adult is recorded because there are legal issues like the distribution of property involved. However, it is but natural for grieving parents not to report the death of their infant. That is why CRS continues to report only 30% of child deaths. Considering this natural tendency of people, it may therefore be more pragmatic to change the law rather than expect the people to change.

The responsibility to legally report 100% child deaths (CRS) should be entrusted with the Gram Sevak, who draw a government salary. This information must be computerized and decentralized, so that immediate compilation of report is possible.

3. The Maharashtra Government should take immediate steps to ensure that the MIS of the health department and reporting of child deaths and malnutrition of the ICDS is complete and accurate. The present difficulties and possible solutions have been discussed in this report in details; to mention the important points:
  - i) Reporting a child death brings censure and investigation on the person, while the report is accepted smoothly if no child death is reported. This situation must be reversed. The reporting of a child death must be encouraged, and failure to report must be punished.
  - ii) An environment where child deaths can be reported fearlessly must be created. This can be done by implementing a scheme like the Voluntary Disclosure Scheme for an year, when the health staff will learn of the reality of the situation of child deaths. This year can then be used as a baseline, and progress measured against this baseline.
  - iii) Help from the individuals who are likely to know of the death of a child – Dai (traditional birth attendant), Officials of women's groups, Village head, Police Patil,

members of the Gram Panchayat and Women Gram Sabha, SHGs etc. may be sought.

- iv) In urban areas, information may be collected from private practitioners and hospitals on a regular basis.
  - v) The de-facto method to record child deaths may be adopted by the MIS of the health department and ICDS. This will ensure coordination with CRS data, while also ensuring completeness of the information.
  - vi) Questions related to child death may be added to the door to door survey carried out by the ICDS aanganwadi worker and the nurse of the health department. The aanganwadi worker should be encouraged on reporting every child death.
  - vii) The health department's MIS should be simple and small and it should enable decision-making at the local level. The quality and completeness of its data should be ensured and stress should be given on making certain that it is used for decision-making at the local level.
  - viii) The MIS form as well as monthly review meetings at all levels should start with the discussion on child deaths.
  - ix) An intelligence system should be created within the health department to report any child death immediately. Local and senior officers should take immediate action based on this information. This intelligence system should alert the government, rather than the news of child deaths in newspapers.
4. Government should give priority to the issue of child deaths over other issues such as family planning and immunization in the departmental review and evaluation of senior officers.
  5. The recording and reporting of child deaths must be closely supervised.
  6. Failure to report a child death is the violation of human rights and equivalent to corruption. Failure to report a child death and failure to insist on complete and accurate reporting of child deaths should be considered a serious offence and must be penalized severely.
  7. The 15 times under reporting of severe malnutrition by ICDS as compared to NNMB is shocking and unacceptable. This under reporting must be investigated and corrected immediately.
  8. Looking at the grave lacunae and inefficiency of the health department MIS, it is necessary to immediately restructure the decision making centers so as to make it accountable, able and responsible.

9. The District Collector and Chief Executive Officer should review the reporting of child deaths of the health department and ICDS at the district level, at the regional level, the Commissioner should review while at the sub-district level and the Chief Secretary at the province level. SRS data should be used to verify the completeness of this reporting. Experts should be appointed to help the Chief Secretary in this evaluation.
  10. The Gram Sabha, NGOs, journalists and people's representatives should be requested to report any child death that they learn of. A printed post card may be published to enable them to report these deaths easily. The District Collector should verify whether these deaths are recorded by the MIS, ICDS and CRS.
  11. The key reasons for child deaths in Maharashtra are a. neonate deaths, b. pneumonia, c. diarrhea and d. malnutrition. Today, 75% of the infant deaths are neonate deaths. Drawing from many successful experiments that demonstrate that these deaths can be prevented by proper care and treatment, the government should train a women in every village, hamlet and habitation as a health worker. Program to ensure that all children including neonates get immediate treatment at home or at the nearest hospital must be implemented.
  12. Maharashtra Government should give first priority to the eradication of child mortality and malnutrition. It is necessary to have political willpower, administrative efficiency and an aware society to achieve the State's target of bring down IMR to 15 by 2010. A campaign to make 'Child Death Free Maharashtra' should be launched.
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Government of Maharashtra

# **Child Deaths Evaluation Committee**

Second and the final report  
(24<sup>th</sup> March 2005)

## **Recommended Measures On Child Mortality and Malnutrition**

(Executive Summary)

# Executive Summary

## A) The Child Mortality Evaluation Committee

As announced in the legislative house, the government of Maharashtra established the 'Child Deaths Evaluation Committee' on the 12<sup>th</sup> of December 2003 (GR No BMS / 2003 / P K 281/2003, K K 3, dated 12/12/2003).

Dr. Abhay Bang is the chairman of the committee which started off with 13 members and with new members joining in January 2005, its final strength was 17 members.

**The Scope of Work** of the committee includes

1. Assessing infant and child deaths in the state.
2. Reviewing malnutrition amongst children in the tribal areas.
3. Reviewing all schemes that have been designed for reducing child mortality, infant mortality, maternal mortality, malnutrition etc and recommending measures to remove the lacunae within these.

## B) Focus of the two reports of the Committee

**The first report**, submitted on the 24<sup>th</sup> of August 2004, focused on the magnitude and causes of child mortality and malnutrition in Maharashtra. It also looked into the implementation of various orders earlier issued by the government.

**The second and final report**, (submitted on the 24<sup>th</sup> of March 2005) concentrates on recommending measures to the government to reduce malnutrition and child mortality.

## C) The Challenge of Child Mortality and Malnutrition

- Government of India's estimates (Sample Registration System, SRS) place the infant mortality rate (IMR) in Maharashtra at 45, (2002) with very little improvement in the last seven years.

- According to these estimates, nearly 120,000 children under the age of 5 years die each year in Maharashtra. The voluntary organizations put this estimate at 175,000.
- 5.4% of all children in Maharashtra, i.e. nearly 800,000 are severely (grade 3+4) malnourished (NNMB). An additional 21%, nearly 3.2 million children are moderately (Grade 2) malnourished.

## **D) Goal**

Maharashtra has adopted a population policy with a goal of reducing the Infant Mortality Rate, from the present rate of 45, to 15 by the year 2010.

Most child deaths occur due to a combination of malnutrition and diseases caused by infections. Neonatal deaths, pneumonia and diarrhoea cause 80% of all child deaths in the state. These three causes can be addressed by simple measures. It is therefore reasonable to expect that the goal of reducing child deaths can be achieved.

## **E) Boundaries and the Focus**

The committee is aware that social and economic conditions are important determinants of child deaths. However, since the committee has been formed to primarily look into health and nutrition related issues, it has focused on recommending immediate measures in these two areas so that child deaths and malnutrition can be rapidly reduced in the next five years.

## **F) Measures and Recommendations**

The **main directions** of these recommendations are

- A) The government must accord a high priority to the problems of child deaths and malnutrition and allocate necessary funds to solve the problems along with introducing an accountability system at the all levels of administration. The committee has suggested the deprived groups and high priority geographic areas.
- B) Each village, habitat, hamlet or slum should have an Anganwadi for nutrition program and a local community health worker. These two

workers should reach out to every household with the recommended health and nutrition measures.

- C) An essential package of technical interventions to reduce child mortality and malnutrition has been recommended.
- D) The need to regularly monitor and evaluate government activities has **been emphasized and measures have been suggested for people's** participation in this war against child mortality and malnutrition.

## **1. State Policy**

- i. Reducing child deaths and malnutrition must be a matter of immediate priority for government. A time-bound campaign lead by the highest leadership in government should be launched.
- ii. Children constitute 14% of the population of the state. Which means nearly 15 million children are at risk. Government needs to allocate on priority basis separate funds in the budget for alleviation of malnutrition and child deaths.
- iii. The government should identify deprived districts in the state based on the infant mortality rate and proportion of malnutrition. These districts along with the tribal blocks and vulnerable communities should get proportionally additional financial and human resource support for alleviation of child deaths and malnutrition.

The committee recommends that the following areas / community groups in Maharashtra be treated as the deprived and vulnerable groups. These areas / groups should receive the top priority for any intervention that is planned.

- (1) All tribal talukas in the state.
- (2) All rural areas in the districts in which the infant mortality rate is higher than the state average.
- (3) Remote talukas and villages in the remaining districts.
- (4) Urban slums and pavement dwellers.
- (5) Population groups who temporarily migrate for the livelihood.

- iv. Designed and planned on the lines of the very successful '**Sant Gadgebaba Gramswachchata Abhiyaan**', Government should launch a state wide competition with **prizes for 'Child Death Free Village' and 'Malnutrition Free Village'**. The competition should be widely publicized with attendant public education on the issue. Gram panchayats and **women's** savings groups should be given the opportunity and finances for the activities to reduce malnutrition and child deaths.
- v. The various government programmes to reduce maternal and child mortality and malnutrition should be implemented primarily through the **state government's 'Rajmata Jijau Mother and Child Health and Nutrition Mission' and the** Health and Family Welfare department. The objectives of the proposed mission should include reducing child mortality on priority basis.

## **2. Administrative Measures**

- i. Preventing child deaths must be the highest priority of the health department. This must reflect prominently in the performance review and appraisals of health department personnel across all levels.
- ii. Incidence of child mortality must be an integral part of the reviews periodically conducted by the Chief Executive Officer of the Zilla Parishad and the Divisional Commissioner. It should also be part of their own performance appraisal.
- iii. A system of performance accountability on the issue of child deaths and malnutrition must be introduced across all levels of the health department and Integrated Child Development Scheme (ICDS).
- iv. For such monitoring and evaluation, 100% and accurate recording of births and deaths is necessary. This will mean that the Management Information System (MIS) of the health department will have to be immediately improved to record and report all child deaths. This can be done by implementing the recommendations made by this committee in the first report.

- v. It is recommended that a transparent policy and clear guidelines should govern appointments and transfers of health system personnel including doctors and nurses. These have been delineated in the report.
- vi. Government implements various schemes addressing maternal mortality, malnutrition and child deaths. It is necessary to develop a mechanism by which the implementation of these schemes will be evaluated and the impact assessed against the financial cost incurred. This evaluation should be done every two years by a capable and reputed agency outside the government system. To begin with, the following activities need such immediate evaluation
  - (1) Iron-folic acid tablets that are distributed to pregnant women.
  - (2) The monetary incentive scheme for safe delivery.
  - (3) Supplementary nutrition provided to children in the 3-6 year age group through the anganwadi.
  - (4) The Management Information System (MIS) of the health department.
  - (5) The current and future interventions to reduce child mortality.
- vii. Monitoring mechanisms of the health system should be decentralized. People's participation should be elicited and obtained in the monitoring committees that can be set up from the village to the state level. These committees can be given the responsibility of monitoring implementation of health schemes.

### **3. Improving the ICDS to address malnutrition**

- i. The coverage of the ICDS must be increased to cover all children in the state. (The Union government has already doubled the budgetary provision for the same in the 2005 budget)
- ii. The focus of the ICDS must be altered from the current near exclusive focus on feeding children of 3-6 years age to :
  - Neonates, children in the 0-2 year group, pregnant and lactating mothers and adolescent girls must form the target group for the ICDS.

- Health education, neonatal care, diagnosis and treatment of sick children and supplementary nutrition education must be the important interventions.
  - Instead of the anganwadi centre merely becoming a distribution point for food, it should take these services to each doorstep.
- iii. The figures and data on malnutrition reported by the ICDS does not seem to be reliable. These data must be verified and the methods of measurement corrected and validated regularly with the help of the National Nutrition Monitoring Bureau (NNMB) of the central government.
  - iv. Rather than initiating treatment after a child is severely malnourished, the earlier manifestation of growth faltering should be detected and immediate remedial action started.
  - v. Along with supplementary nutrition, health education and treatment of select diseases of children should be available at the anganwadi center.
  - vi. There should be special emphasis on improving health of adolescent girls and preventing child marriages.

#### **4. Addressing malnutrition in tribal areas**

- i. The gramsabhas in tribal villages must be involved in the planning and implementation of development schemes.
- ii. To ensure integrated development and co-ordination amongst various departments, senior officers from the administrative services must be appointed as the project officer.
- iii. Effective implementation of the employment guarantee scheme and better access of the tribals to forests will result in poverty alleviation.
- iv. Extensive public education campaigns should be initiated to educate the tribals on health issues and eradicate superstitions.
- v. One health worker should be trained in every village / hamlet. She will then be the conduit for taking health services to everyone in the village.

- vi. Providing supplementary nutrition twice a day to the children should be tried on experimental basis.
- vii. Effective and rigorous implementation of various other measures suggested in this report.

## **5. Health interventions for reducing child deaths**

Simple public health interventions can prevent two third of the current child deaths. These interventions should therefore be incorporated into the state health programmes.

- i. Effective health education to improve knowledge and practices of both parents.
- ii. The highly effective and proven '**Home Based Neonatal Care**' method to be taken to scale.
- iii. **Treating children's** illnesses such as pneumonia, diarrhoea, malaria, measles and worms in the village itself by a trained health worker.
- iv. Hospitalization wherever needed.

## **6. Interventions to reduce maternal mortality**

- i. Normal deliveries should take place at the PHC and high risk deliveries at the rural / district hospitals. At both these places the necessary emergency services must be made available round the clock.
- ii. No economic incentives should be offered to women for delivering in the government health facilities. Instead, the quality of care and the behaviour of the staff should become better and humane.
- iii. In order to ensure safety in home deliveries, the traditional birth attendants should be trained and provided with kits.
- iv. To enable quick transfer of a case of difficult delivery to the hospital, a '**vehicle and delivery fund**' should be made available at the village level. This fund should be entrusted to a '**mothers support group**' in the village.
- v. Private obstetrics services should be monitored and regulated in order to ensure good quality.

## **7. Interventions to make health services effective**

The health services should be responsible to make available various measures suggested to reduce child mortality in the state. For that purpose :

- i. A community health worker (CHW) should be present in every village / hamlet / slum. She should be selected properly, trained well, motivated, provided with adequate supplies, supervised and monitored well. Help can be sought for the same from non governmental organizations in the state.
- ii. This CHW should not be made a government servant. Her control should be in hands of a village health committee.
- iii. Such a **CHW is a part of the 'National Rural Health Mission'** that has been announced by the Central Government. Efforts should be made to include Maharashtra in this mission.
- iv. The health interventions suggested above (under 6) to address child deaths should be implemented in two phases (details in the report) in a time bound manner in the entire state.

## **G) Action on the recommendations and the follow-up**

- i. Regular monitoring of the actions on the recommendations made by the committee in the first and second report is essential. A high powered group should be established for this purpose.
- ii. Information on the implementation of the recommendations and the impact on child deaths and malnutrition should be published each year.

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

पत्रांक: koshish/Adv/SD/13

दिनांक: 16 अक्टूबर 09

सेवा में  
माननीय सर्वोच्च न्यायालय के आयुक्त  
(In the case: PUCL Vs UOI and ORS, Writ Petition( Civil) No 196 of  
2001)  
नई दिल्ली।

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

महाशय,

आपका ध्यान आकृष्ट करते हुए बताना चाहता हूँ कि गया जिला के अतरी प्रखण्ड अन्तर्गत टेटुआ टोला  
खरौना में मुर्ति देवी का भूख से मौत मिडिया द्वारा प्रकाशित एवं महुआ न्यूज पर प्रसारित के आधार  
पर पांच सदसीय टीम का गठन किया गया और उसकी रिपोर्ट आपके पास अग्रसारित कर रहा हूँ। इससे  
पहले 31 अगस्त 09 को भूख से मौत की केश स्टडी मुख्य सचिव, बिहार सरकार को जमा किया  
गया है, जिसमें छः केश 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।

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

सधन्यवाद।

भवदीया

(रूपेश)

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

पत्रांक: koshish/Adv/SD/13A

दिनांक: 16 अक्टूबर 09

सेवा में  
मुख्य सचिव  
बिहार सरकार  
पटना, बिहार।

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

महाशय,

आपका ध्यान आकृष्ट करते हुए बताना चाहता हूँ कि गया जिला के अतरी प्रखण्ड अन्तर्गत टेटूआ टोला खरौना में मुर्ति देवी का भूख से मौत मिडिया द्वारा प्रकाशित एवं महुआ न्यूज पर प्रसारित के आधार पर पांच सदसीय टीम का गठन किया गया और उसकी रिपोर्ट आपके पास अग्रसारित कर रहा हूँ। इससे पहले 31 अगस्त 09 को भूख से मौत की केश स्टडी आपके कार्यालय में जमा किया गया है, जिसमें छः केश 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।

सितामढ़ी के परसौनी प्रखण्ड अन्तर्गत घीसरा गांव में 9 अक्टूबर को भूख से मौत की सूचना महुआ न्यूज पर आया है जिसका तथ्य संकलन जल्द भेज दूंगा।  
सधन्यवाद।

भवदीया

(रूपेश)

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# मुर्ति देवी के भूख से मौत का तथ्य संकलन प्रतिवेदन

मगध प्रमण्डल गया जिले के अत्तरी प्रखण्ड अन्तर्गत टेढुआ टोला खरौना में मुर्ति देवी की भूख से हुई मौत ( मिडिया द्वारा प्रकाशित सूचना के आधार पर )

घटना स्थल— टोला खरौना—प्रखण्ड मुख्यालय से लगभग 1 किलोमीटर उत्तर पश्चिम जिला मुख्यालय से लगभग 40 किलोमीटर उत्तर पूरब की दूरी है।

## सलाहकार के साथ तथ्य संकलन समूह का नाम

1. अख्तर हुसैन, 15 सुत्री, पूर्व उपाध्यक्ष, बिहार सरकार, पटना, ।
2. कारू, गया, बोध गया, भूमि मुक्ति आंदोलन के कार्यकर्ता।
3. जितेन्द्र, पत्रकार, पटना, बिहार।
4. रामलगन निराला, बाढ़ सुखाड़ मुक्ति आंदोलन, सामाजिक कार्यकर्ता, मधेपुरा।
5. सिद्धार्थ, खाद्य सुरक्षा शोधार्थी, बेतिया, पश्चिम चम्पारण।

## एतिहासिक पृष्ठभूमि

मगध प्राचीन काल से ही संस्कृतिक और धार्मिक दृष्टिकोण से काफी महत्वपूर्ण रहा है। धन्य-धान्य से परिपूर्ण यह इलाका प्राकृतिक दृष्टिकोण से हरा-भरा था। यहा के भी संस्कृति का विकास नदियों के किनारे, पहाड़ों के झरने और वनों के कारण हुआ। बौध धर्म की स्थापना भी निरजंजा नदी के किनारे बुद्ध को बुद्धत्व की प्राप्ति के बाद हुआ। आज भी लाखों लोग अपने पितरों के तर्पण हेतु फल्गु नदी के किनारे विष्णु की नगरी गया में पिंड दान हेतु आते हैं। आज से ढाई हजार वर्ष पहले गौतम बुद्ध का निर्वाण, मरे हुए जानवर का सड़ा हुआ मांस खा लेने से हुआ था ऐसा कहा जाता है, क्योंकि जिनके यहां गौतम बुद्ध ठहरे थे उसके पास इसके अलावा घर पर कुछ भी नहीं था। मगध में भूइयों जैसे अति निर्धन परिवारों की स्थिति आज से ढाई हजार साल पहले जैसे ही है। मुर्ति देवी की भूख से हुई मौत कोई नई घटना नहीं है। आज से तीन साल पहले गया जिले के मोहनपुर अंचल अन्तर्गत जाल्ही बांगिया गांव में 14 लोगों की मौत गाड़ा गया बकरा को निकालकर उसका मांस खाने से हो गया था। उसी प्रकार डोभी प्रखंड के 30 वर्षीय विनोद भूइयों गुरपा निवासी 18 वर्षीय नरेश बिरहोर, पतवास निवासी 35 वर्षीय मंजू देवी, गुरारू प्रखंड के कोची निवासी हरदेव मांझी, गीता देवी, और उनके बच्चे कुल मिलाकर दो दर्जन से अधिक मौत तीन वर्ष के अन्दर हो चुकी है। जिसमें 6 साल के बच्चे से लेकर 80 साल की ठगनी देवी जैसी वृद्ध महिला भी शामिल है।

## जाँच कमिटी खरौना पहुँची

10 अक्टूबर प्राइवेट टी0वी0 चैनल साधना / महुआ न्यूज के द्वारा पता चला कि मुर्ति देवी की मौत भूख से हो गयी है। 11 अक्टूबर 09 के सुबह दैनिक जागरण में खबर आया कि बिहार के मुख्य मंत्री श्री नीतिश कुमार ने जिला समाहर्ता को इसके जाँच का आदेश दिया है।

सुप्रीम कोर्ट द्वारा बहाल कमिश्नर के सलाहकार द्वारा गठित पाँच सदसीय यह कमिटी प्रातः नौ बजे घटना स्थल के लिए एक प्राइवेट गाड़ी सुमो द्वारा पटना से 11 अक्टूबर 09 को चल दिये। पटना गया मार्ग में जब नदौल स्टेशन के पास गुजर रहे थे तो पता चला कि एक बच्चे का अपहरण हो गया है अतः आकोशित ग्रामीण सड़क जाम किये हुए है। सैकड़ों गाड़ी सड़क पर खड़ी थी। आधा घंटे इंतजार के बाद भी जाम नहीं हटा तो स्थानीय लोगों के सलाह पर हमलोग 5 कि० मी० पीछे मसोढ़ी घौषी रोड़ से बन्धुनगर के रास्ते जाने लगे। बन्धुनगर के पाँच कि० मी० पहले पुल क्षतिग्रस्त था और एक ट्रक फँसा हुआ था। आगे रास्ता बंद था। पुनः लोगों के सलाह पर इमलिया चक के रास्ते काको मार्ग से चलना प्रारम्भ किया। जहानाबाद एकंगर रोड़ के रास्ते हमलोग आगे बढ़े।

दोनों तरफ खेत परती और बीरान था कहीं-कहीं छिट पुट धान के पौधे खेतों में दिखाई दे रहा था। यही स्थिति जहानाबाद, नालंदा के एकंगर, इस्लामपुर तथा हुलासगंज गया जिले के कुड़वा, खिजिर सराय तथा अतरी मार्ग पर स्थित है। ज्ञात हो कि जून, जुलाई और अगस्त माह में निर्धारित लक्ष्य से लगभग पचास प्रतिशत से भी कम वर्षा हुई थी। अतः धान की रोपनी मगध प्रमण्डल में नहीं के बराबर हुई है। बिहार आपदा प्रवन्धन के 6 अगस्त 09 के मुताबिक गया में 1.2 प्रतिशत नवादा में 1.2 प्रतिशत जहानाबाद में 3.8 प्रतिशत तथा अरवल में 3.8 प्रतिशत ही आकड़े दर्ज हैं। बाढ़ सुखाड़ मुक्ति आंदोलन के एक सर्वेक्षण टीम के रिपोर्ट के अनुसार 20 अगस्त 09 तक पाँच जिलों के करीब 12 प्रखण्डों में सभी पोखर, आहर, नाले और पड़न सुखे थे। पहाड़ी से वर्षा जल नीचे उतरा ही नहीं था अतः धान की रोपनी उस समय तक सिर्फ निजी ट्रयबेल से छिट पुट हुआ था। ज्ञात हो कि मगध में धान की रोपनी का सही समय 15 जुलाई से 15 अगस्त हैं। भूगर्भीय जल अति दोहन के कारण काफी नीचे चला गया था। सभी चापानल सूख रहा था। पीने के पानी का संकट हो गया था। अतः 14 अगस्त 09 को बिहार सरकार ने 26 जिले को सूखाग्रत घोषित किया है। जिसमें मगध प्रमंडल के सभी जिले शामिल हैं। खुद मुख्य मंत्री नितिश कुमार ने अखबारों के माध्यम से यह कहा है कि 1966-67 से भी भयंकर अकाल की स्थिति है। उन्होंने जो बीज बचाने के लिए रुपये जिले में किसानों को देने के लिए सबसिडी भेजा था वह 20 अगस्त 09 तक अधिकांश गाँव के किसानों को नहीं मिला था। 1 कड़ोड़ 25 लाख परिवार को 100 किलो मुफ्त में अनाज तथा 250 रुपये देने की घोषणा की गयी थी तथा नरेगा के तहत ग्रामीण इलाकों में काम करने वालों को 100 से अधिक दिन काम देने की घोषणा हुई, लेकिन अभी तक इन घोषणाओं पर अमल नहीं हुआ। परिणाम स्वरूप बड़े पैमाने पर खेतिहर मजदूर राज्य तथा राज्य से बाहर काम की तलाश में बाहर चले गये हैं।

### गाँव के लोगों की बात

- हमलोग टेटुआ टोला खरौना में पहुँचे तो उस समय लगभग दिन के 3.30 संध्या बज चुके थे। जिला समाहर्ता के अलावे प्रखंड विकास पदाधिकारी, थाना प्रभारी, अमला बराहील, मुखिया, ठीकेदार लोगों की भीड़ लगी थी। हमलोग सबसे पहले 22 वर्षीय छोटन मांझी, वार्ड सदस्य से मिले। छोटन ने एक आवेदन की छाया प्रति 6 अक्टूबर 09 का प्रखण्ड विकास पदाधिकारी के नाम से दिखाया जिसमें पचासों लोगों के हस्ताक्षर एवं ठेपा के निशान हैं उसमें जून माह से जनवितरण प्रणाली से अनाज न मिलने की शिकायत है उसमें भूखमरी का जिक्र करते हुए यह कहा गया कि अगर तत्काल अनाज मुहैया नहीं कराया गया तो कहीं लोगों की जान भी जा सकती है।
- ग्रामिणों ने बताया कि किशोरी के जाने के एक सप्ताह बाद ही मुर्ति देवी का चुल्हा उपसा हो गया। हमलोग अपना पेट काटकर कभी-कभी कुछ दे देते थे लेकिन हमलोग भी भूमिहीन तथा भूझ्यो जाति के महादलित हैं हमलोगों को भी पिछले जून माह से खेतों में काम नहीं मिल रहा है तथा राशन का वितरण राशन दुकानदार नहीं दिया है। हमलोगों की स्थिति भी भूखमरी वाली है। अतः मुर्ति देवी की मौत अनाज के अभाव में ही हो गया।
- टेटुआ टोला खरौना में कुल लगभग 140 मूझ्यो परिवार है जिसमें 65 से उपर वृद्धों की संख्या 28 है जिसमें मात्र 14 लोगों को ही वृद्ध पेंशन का लाभ मिलता है। 140 परिवार में से 29 परिवार पलायन कर गया है और उसके बुढ़े माँ-बाप घर पर ही है। लोग बताये कि अगर इनलोगों को सरकारी सहायता नहीं दी गयी तो इनका भी हाल मुर्ति देवी जैसा हो सकता है। 29 परिवार जो पलायन किया है उसमें 84 बच्चे भी माँ-बाप के साथ ईट भट्टा पर काम करने चले गये हैं। 45 लोगो के पास जॉब कार्ड है लेकिन एक दिन भी नरेगा में काम नहीं मिला।
- ग्रामीणों का कहना है कि मुर्ति देवी की लाश को लेकर जब हमलोगों ने सड़क जाम किया तो प्रखंड विकास पदाधिकारी, पुलिस द्वारा जबरन हमलोगों को खदेड़ दिया गया तथा बिना

प्राथमिकी दर्ज किये जबरन लाश को जलवा दिया गया ताकि पोष्टमात्म नहीं होने के पहले साक्ष्य मिटाया जा सके।

### मुर्ति देवी का आर्थिक समाजिक हालात

- मुर्ति देवी के घर का मुआयना किया गया। झोपड़ी नुमा घर पुआल की छावनी मिट्टी की दिवाल जो एक तरफ गीर चुका है। दो कोठी ;मिट्टी का अनाज रखने का बड़ा बर्तन जिसमें एक खाली था लेकिन दूसरा कोठी में पी0डी0एस0 की दुकानदार ने जबरन आज कोठी में अनाज डाल दिया है। चुल्हा को भी निपवा दिया गया था जिससे कि साक्ष्य को मिटाया जा सके।
- मुर्ति देवी का इकलौता बेटा किशोरी ने बताया कि जून, जुलाई में तीन किस्तों में दोनो पति-पत्नी के लिए पाँच हजार रूपया दादनी के तौर पर ;एडवांसद्ध ईट भट्टा का मालिक के ठीकेदार द्वारा दिया गया था जो अगस्त माह में खत्म हो गया। एक महीने पहले माँ के लिए तीन किलो चावल रखकर ईट भट्टा चला गया था। मृत्यु का समाचार मिलने पर रविवार को आया हूँ।
- मुर्ति देवी भूइयाँ जाति की महादलित भूमिहीन परिवार से आती है। इसके पास रहने के अलावे जमीन नहीं है। इसके पति का देहान्त एक वर्ष पहले ही हो गया। अतः लक्ष्मीवाई पेंशन योजना से भी इन्हें नहीं जोड़ा गया।
- मुर्ति देवी का नाम बी0पी0एल0 सूची में है। सालो भर का कुपन सादा था लेकिन सभी पिछले साल का कुपन नवम्बर 08 से जून 09 तक का पी0डी0एस0 दुकानदार ले लिया इस बात को दुकादार भी स्वीकार किया है। जुलाई 09 से कुपन सादा है जिसका छाया प्रति संलग्न है।
- किशोर मांझी ने स्वीकार किया कि माँ के अत्येष्टि के लिए विकास प्रखंड पदाधिकारी ने 1500 रूपये तथा दस हजार रूपये दिया।

### पी0 डी0 एस0 दुकानदार से बात-चीत

पी.डी.एस. दुकानदार सरोज देवी पुत्र इंदल कुमार ने कहा कि 8 अक्टूबर 09 को हमें आवंटन जून, जुलाई अगस्त 09 का प्राप्त हुआ है और मैं 9 अक्टूबर 09 से अनाज बांट रहा हूँ। उसने कहा कि 28 अन्तोदय योजना के लाभार्थी खरौना टोला में है और 32 लाल कार्ड धारी बी0पी0एल0 सूची में है। पिछले माह का अन्तोदय योजना का अनाज हमें नहीं मिला है। जिसके कारण हम अनाज नहीं बांट सके। जबकि ग्रामीणों का कहना है कि जिला समाहर्ता के आने के सूचना के बाद आनन-फानन में 11 अक्टूबर 09 की सुबह से अनाज बांटना शुरू किया।

### मुखिया से मुलाकात

मुखिया सुधा देवी के पति राजेश पासवान बताया कि 100 किलो का अनाज प्रत्येक राशन दुकानदार को अतिरिक्त दिया गया है। यह मुझे मालूम नहीं है न इस प्रकार के आदेश से अवगत कराया गया है। दुकानदार ने भी 100 किलो अतिरिक्त अनाज का उठाव कभी नहीं किया है। यह सरोज देवी का पुत्र इंदल कुमार ने भी बताया। मुखिया पति ने कहा कि मुझे किसी ने मुर्ति देवी की स्थिति के बारे में नहीं बताया है।

### पंचायत के लोगो से बातचीत

पी0डी0एस0 दुकान के निरिक्षण के दौरान पंचायत के करीब 50 लोग जुट गये। ग्रामीणों ने यह स्वीकार किया कि बी0पी0एल0 प्रपत्र (क) का आवेदन पिछले दो वर्षों से दिया जा रहा है। लेकिन अभी तक हम लोगो का सूची में नाम नहीं दर्ज हुआ है। ग्रामीणों ने बताया कि इस बार 5 प्रतिशत से कम धान की रोपनी हुई है। रबी फसल के लिए बीज, खाद्य तथा सिंचाई के लिए पूँजी का अभाव है। काफी दिक्कत हो रही है। ऐसा सूखा 1966-67 के बाद पहली बार हमलोग झेल रहे है।

### **प्रखंड विकास पदाधिकारी से बातचीत**

प्रखंड विकास पदाधिकारी से दूरभाष पर बात हुई जिसमें प्रखंड विकास पदाधिकारी ने भी कहा कि 4 दिन पहले अनाज का उठाव हुआ है। 12 अक्टूबर 09 के अनुसार उन्होंने यह भी कहा कि कबीर अत्येष्टि योजना के तहत मृतका के पुत्र को 1500 रुपये 10 अक्टूबर 09 को उपलब्ध करा दिया गया है तथा आई.ओ.पी.एस. के अर्न्तगत 10000 हजार रुपये भी दिया गया।

### **जिला पदाधिकारी से बातचीत**

12 अक्टूबर 09 को सुबह 9.40 में जिला समाहर्ता से मुलाकात हुई। जब हमलोगों ने सारी स्थिति उनके सामने रखा तो उन्होंने भूख से हुई मौत से साफ इंकार किया और उन्होंने कहा कि मुर्ति देवी की मौत भूख से नहीं बल्कि दिवाल की लिपाई करने के दौरान गीर कर हुई हैं मुर्ति देवी लकवाग्रत तथा बिमार थी। उन्होंने यह भी कहा कि पुस्तिका के अनुसार पी0डी0एस0 के अनाज का उठाव 8 सितम्बर 09 को एक महिना पहले हो गया है। लेकिन पी0डी0एस0 दुकानदार अनाज का वितरण नहीं किया था। उन्होंने यह भी कहा कि विधवा होने के कारण उन्हें लक्ष्मीवाई पेंशन योजना का लाभ भी नहीं मिला। इसके लिए हमने कर्मचारी तथा प्रखंड विकास पदाधिकारी से सफाई मांगी है तथा 65 वर्ष के उपर के वृद्धा की सूची मांगी है। उन्होंने यह भी कहा की सभी कूपन श्री किशोरी, मुर्ति देवी का पुत्र अपने साथ लेकर चला गया था। उन्होंने यह भी कहा कि उसे ठिकेदार द्वारा 5000 रुपये दिया गया था। उन्होंने यह भी कहा कि उसका पुत्र उसके पास अनाज छोड़कर गया था। उन्होंने यह भी कहा कि प्रत्येक प्रखंड विकास पदाधिकारी को प्रत्येक पी.डी.एस. दुकान में 100 किलो अतिरिक्त अनाज का भंडार रखने का निर्देश दिया जा चुका है।

### **संगठनों से बातचीत**

- बाढ़ सूखाड मुक्ति आंदोलन के अनुसार पूरे मगध में सुखा की भयंकर स्थिति है। पंचायत के करीब पचास लोगो ने भी इस बात की पुष्टि की है। पलायन भी बड़े पैमाने पर है। अतः मुर्ति देवी की घटना का दोहराव न हो इसके लिए नरेगा के तहत सभी को काम दिया गया। विशेष योजना के तहत ताकि शेष बचे हुए लोगों को काम दिया जा सके। जो लोग बाहर चले गये है, अपने माता-पिता को छोड़कर ऐसे सभी 60 साल से उपर के वृद्धो को मुफ्त में अनाज दिया जाय। ताकि यह घटना दोबारा न घटे।
- एकता परिषद के प्रदीप प्रियदर्शी के अनुसार इस गांव में पी डी एस से राशन नहीं मिल रहा है। इसकी सूचना प्रखण्ड कार्यालय में दी गई है। पदाधिकारी शिकायत पर घ्यान नहीं देती है। मृत्यु के बाद भी हमलोगों ने सूचना दिया परन्तु रूत्रा में स्थिति अभी भी गंभीर है।

### **विभिन्न सरकारी योजनाओं की स्थिति**

#### **जन वितरण प्रणाली**

- मुर्ति देवी का नाम बी0पी0एल0 सूची में है। इनके पास लाल कार्ड है। सालो भर का कूपन सादा था लेकिन सभी पिछले साल का कूपन जूलाई 08 से जून 09 तक का पी0डी0एस0 दुकानदार ले लिया इस बात को दुकादार भी स्वीकार किया है। जुलाई 09 से कूपन सादा है जिसका छाया प्रति संलग्न है। दुकानदार का कहना है कि 4 माह से राशन नहीं मिला है। जबकि मुर्ति देवी का बेटा का कहना है कि जून 2008 से राशन नहीं उठाये हैं। मृत्यु के बाद तीसरा दिन 11 अक्टुबर को 1 क्वींटल अनाज दिया गया।
- राशन डिलर से जब मैं बात किया तो उसने कहा पिछले चार माह का कोई योजना का अनाज हमे नहीं मिला है। 9 अक्टुबर को अनाज आया जिसके कारण अनाज बितरण में देरी हुई।
- इस गाँव के रहने वाले गोला माझी का कहना है कि एक तरफ हमारे यहाँ सूखा है और दूसरी तरफ सरकार राशन नहीं बँटवाती हैं तो हम गरीब भला कैसे अपना जीवन-यापन करेगे?

### **राष्ट्रीय परिवार लाभ योजना**

इस योजना के तहत मुर्ति देवी के परिवार को उस वक्त के तात्कालिक रूप से प्रखण्ड विकास पदाधिकारी के द्वारा परिवार के सदस्यों को भूख से मरने पर 10,000 रू0 दिया गया । अन्तयेष्टि के लिए कवीर अन्तयेष्टि योजना के तहत 1500 रूपये दिया गया। परन्तु सही से बी पी एल परिवार को इस योजना का लाभ नहीं मिल पाता है।

### **इन्दिरा आवास योजना**

मुर्ति 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 तुम्हारे नाम से आवास नहीं आया है।

### **राष्ट्रीय ग्रामीण रोजगार गारंटी योजना**

मुर्ति देवी के परिवार के पास जॉब कार्ड नहीं है। 140 भूइया परिवार के इस बस्ती में 45 लोगों को जॉब कार्ड है परन्तु सभी सादा है। इन्हें आज तक एक दिन भी काम नहीं मिला है।

इस गाँव के परिवार को देखकर ऐसा लगता है घर में समुचित भोजन का अभाव अभी भी बना हुआ है। जन वितरण प्रणाली के तहत राशन तथा नरेगा के तहत काम से अभी भी वंचित हैं। यदि समय रहते सरकारी योजना को वास्तविक लाभान्वितों तक नहीं पहुँच पाती हैं तो आने वाला समय में भूख से मौते होंगी और स्थिति काफी भयावह होगा ।

### **राष्ट्रीय वृद्धा पेंशन योजना**

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

### **समेकित बाल-विकास योजना ;आंगनबाड़ी केन्द्र**

इस पंचायत में 12000 की जनसंख्या है जिसमें 6 आंगनबाड़ी केन्द्र है। जिसकी स्थिति बहुत ही खराब है। इस बस्ती में एक भी आंगनबाड़ी केन्द्र नहीं है। आंगनबाड़ी केन्द्र नहीं होने के कारण सभी भूईयां (महा दलित) परिवार के बच्चे आंगनबाड़ी केन्द्र में जाने से वंचित रह जाते हैं। और ये सभी कुपोषित हैं। इस पंचायत के मुखिया पति एवं संबंधित वार्ड सदस्य को मिनी आंगन बाड़ी केन्द्र की अवधारणा के बारे में बिल्कुल पता नहीं है।

### **जननी सुरक्षा योजना**

इस योजना का लाभ कई परिवार ने लिया है और इसकी जानकारी है।

### **अपंगता**

मुर्ति देवी के परिवार का कोई भी सदस्य शारीरिक रूप से विकालंग नहीं है।

### **प्राथमिक स्वास्थ्य केन्द्र**

इस गाँव में प्राथमिक स्वास्थ्य केन्द्र की सुविधा नहीं है। यहाँ के लोगों को अपना इलाज कराने प्रखण्ड स्थित प्रखण्ड अस्पताल में जाना पड़ता है। गाँव वालों का आरोप है कि प्रखण्ड अस्पताल में उनको कोई भी सरकारी सुविधा नहीं मिलती है। जाँच भी बाहर करानी पड़ती है तथा दबा भी बाजार से खरीदना पड़ता है। इस कारण कई झोला छाप डाक्टर इनका आर्थिक शोषण करते हैं।

### **पेयजल सुविधा**

पूरे बस्ती में पांच सरकारी चापाकल है ।

### **मध्याह्न भोजन योजना**

इस गांव से डेढ़ किलो मिटर की दुरी पर नदी के उस पार स्कूल है। इनके परिवार के बच्चे स्कूल नहीं जाते है। बस्ती के अधिकांश बच्चों को स्कूल नहीं जाने के कारण ये बच्चे मध्यान् भोजन योजना का लाभ नहीं उठा पाते है। किशोर कहते हैं कि जब बच्चो को घर में खाने के लिए पैसा होगा और पहनने के लिए कपड़ा होगा तभी बच्चे स्कूल जा सकते हैं अभी तो घर की स्थिति खराब है।

### गरिबी रेखा में नाम

140 भूइया परिवार के इस बस्ती में 60 लोगों को नाम बी पी एल श्रेणी में है। शंष परिवारों ने अपना नाम बी पी एल श्रेणी में जोड़ने के लिए 2007 में ही प्रपत्र क भर कर प्रखण्ड विकास पदाधिकारी को दि या था। लेकिन आज तक कोई भी कार्रवाई नहीं होने की वजह से आधे महादलित परवार खाद्य सुरक्षा योजना का लाभ लेने से पूर्णत या वंचित हैं।

### निष्कर्ष

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

1. मुर्ति देवी को लक्ष्मीवाइ पेंशन योजना का लाभ हलका कर्मचारी द्वारा नहीं जोड़े जाने और उपर से निगरानी नहीं होने के कारण उपरोक्त लाभ नहीं मिला।
2. मुर्ति देवी का नाम वी0पी0एल0 सूची में होने के बावजूद उसे अनाज नहीं मिला।
3. मुर्ति देवी को अन्तोदय योजना से भी लाभ नहीं दिया गया।
4. मुर्ति देवी के पुत्र के द्वारा एक महीना पहले मात्र तीन किलो अनाज दिया गया। ग्रामीणों का कथन सही प्रतीत होता है कि एक सप्ताह के बाद मुर्ति देवी का चुल्हा टंढा हो गया और मुर्ति देवी मांग चांग कर अपना पेट तब तक भर्ती रही जब-तक वह चलने के लायक रही होगी। जब कुपोषण के शिकार होकर चलने से लाचार हो गई तो उसे देखने वाला कोई नहीं था। अतः उसकी मौत 8 अक्टूबर के रात्री में कुपोषण और खाद्य सुरक्षा के अभाव में हो गई ऐसा प्रतीत होता है।
5. जिला अधिकारी द्वारा कहा गया कथन दीवाल लिपने के दौरान गिरने के कारण उसकी स्वभाविक मौत हुई बताना "मनगढ़त" और अपने बचाव में गढ़ी गई कहानी प्रतीत होती है।
6. चुल्हे और घर की लिपाई-पोताई भी साक्ष्य को मिटाने तथा आनन-फानन में चार महीने का एक बार 100 किलो अनाज देना साक्ष्य को मिटाने के लिए कि गई कार्यवाही दिखती है।
7. ग्रामीणों द्वारा सड़क जाम के बावजूद प्राथमिकी दर्ज नहीं करना और आनन-फानन में कबीर अत्येष्टि योजना से 1500 रूपये उपलब्ध कराकर ,10 अक्टूबर 09 को देकर जबरन लाश को जलवा देना भी सच पर पर्दा डालने के लिए कि गई कार्यवाही प्रतीत होती है।
8. टेडुआ टोला खरौना कि 700 की आबादी पर एक भी ऑगन बाड़ी या मिनी ऑगन बाड़ी नहीं है। अतः अधिकाश बच्चे कुपोषित दिख रहे थे। महिलाएँ भी एनिमिया से पीड़ित तथा चेहरा सुखा हुआ दिख रहा था।
9. ग्राम सभा फर्जी हो रहा है जिसके करण पंचायत राज की कल्याणकारी येजनाओ से उचित लाभर्थी वंचित रह चाते हैं।

### सुझाव

- प्रिंट मिडिया और इलेक्ट्रॉनिक मिडिया में खबर आने के बाद मुख्य मंत्री ने जिला अधिकारी को जाँच करने का आदेश जारी किया। जो कहीं से भी न्याय संगत नहीं है। क्योंकि सुप्रिम

कोर्ट के आदेश के अनुसार अगर किसी की भूख से मौत होती है। तो उसके लिए पंचायत में मुखिया, प्रखंड में प्रखंड विकास पदाधिकारी, जिला में जिला पदाधिकारी तथा राज्य में राज्य सचिव मुख्य रूप से जिम्मेवार होंगे। अतः जो खुद अभियुक्त हो सकता है। वह अपने गले में क्यों फंदा लगायेगा। **इस जाँच को किसी अवकाश प्राप्त न्याय विंद से जाँच करवाने पर ही निष्पक्षता की गारन्टी हो सकती है। इससे निष्पक्ष जाँच हो सकती है।** अब तक के रिपोर्ट के अनुसार पिछले तीन वर्षों में 100 से ज्यादा लोगों की भूख से मौत कि खबरें आ चुकी है। जिसमें 40 से अधिक मौत में कोर्ट एफीडेवीट साक्ष्य दिया गया है। दैनिक जागरण के अनुसार खुद मुख्य मंत्री ने जिला समाहर्ता को जाँच का आदेश दिया है।

- स्वास्थ्य विभाग एवं आंगन केंद्र द्वारा जाँच करके सही स्थिति का पता लगाना चाहिए कि कितने बच्चे कुपोषण के शिकार हैं तथा कितनी महिलायें एनिमिया जैसे घातक बिमारी से ग्रसित हैं। एवं विशेष अभियान चलाकर कुपोषण से मुक्ति किया जाय।

### जन वितरण प्रणाली

- गया में लगातार भूख से मौत की खबर आ रही है। राशन की शिकायत लगातार सभी जगह है। राशन आने व बांटने की नियमित सूचना भी नहीं रहती है। इस अनियमितता को ठीक करने की जरूरत है।
- इस संदर्भ में माननीय सर्वोच्च न्यायालय के आदेश कही प्रदर्शित नहीं किया गया है। किसी भी जन वितरण प्रणाली के दुकान पर इसकी जानकारी तक नहीं है। इस आदेश का बोर्ड सभी दुकानों पर लगाने का आदेश देना चाहिए और लग जाना चाहिये। इस आदेश का अक्षरसह पालन करवाने के लिए समूचित व्यवस्था सुनिश्चित किया जाय। महादलितों द्वारा आवेदित प्रपत्र का निष्पादन सर्वोच्च प्रथमिकता पर की जाय।
- लाभार्थी सूची ग्राम सभा में बनाया जाय एवं इस पर कड़ी निगरानी रखी जाय।
- महा दलितों की औसत आयु अन्य वर्गों से अत्यन्त निम्न होने के कारण इनके लिए पेंशन की अर्हता आयु घटाकर 55 वर्ष किया जाय।

### राष्ट्रीय परिवार लाभ योजना

इस योजना की जानकारी सभी ग्रामीणों को नहीं है। इसका प्रचार प्रसार करने की जरूरत है।

### इन्दिरा आवास योजना

इस योजना के अन्तर्गत लाभार्थी का सूची, प्रतिक्षा सूची और सूची तैयार का मापदण्ड को पंचायत अथवा सार्वजनिक स्थलों के दीवार पर लिखा जाना चाहिए।

### पेयजल सुविधा

आने वाले जनवरी माह के बाद पीने 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 ध्वस्त हो गया। उन्हें पूनः बहाल कर किया जा सके। भूगर्भीय जल के सतत जल प्रणाली की स्थापना के लिए राष्ट्रीय ग्रामीण रोजगार गारंटी योजना की सहायता ली जाय।

### राष्ट्रीय ग्रामीण रोजगार गारंटी योजना

इस बस्ती से 28 परिवार रोजगार के लिए परदेश चले गये हैं।

### ग्राम सभा

पंचायतो में नियमानुकूल ग्राम सभा करवाना सुनिश्चित किया जाना चाहिए।

जॉचकर्ताओ का हस्ताक्षर

ग्राम-खैरोना

पलायन व्यक्ति की सूची (ईट भट्टा)

क्रमांक 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
	<b>टोटल</b>	<b>40</b>	<b>44</b>

*Discussion Draft*

**TOWARDS A FOOD RIGHTS CODE:**

**The State, Food Denials and Food Rights**

This volume will try to argue for and outline a proposed Food Rights Code, that lays down statutory duties for public authorities to secure the right to food of all people at all times, normal and emergent.

It will begin with a discussion of the only food related official Codes that currently exist, a range of Famine, Drought and Scarcity Codes. It will trace briefly the historical context of these Codes, and argue that they need to be completely rewritten for the contemporary context of a democratic polity. These Codes, but even their successor Scarcity and Drought Codes of independent India come into force only after people in a region are ravaged by major natural disasters, mainly failures of rainfall and consequent disruption of agricultural production. They have rarely dealt with starvation and the duties of the State to prevent and mitigate it, and also do not aim to help realise people's right to food in normal times, and the duties of public authorities to people who live with prolonged denials of adequate food.

In the light of this initial review of Famine Codes, past and present, this volume tries to suggest an alternative Food Rights Code, which delineates duties of public authorities to a) ensure the right to food of all people in normal times; b) acknowledge, verify and address individual and mass starvation; c) identify people and groups which live with chronic hunger even in normal times and take special measures to protect them from starvation and secure their rights to food; and d) address emergent situations of food scarcity arising from extraordinary natural, human made and economic situations.

The volume compiles and draws from many sources. It contains contributions from many sources. The segment on food rights in normal times is based on 'Supreme Court Orders on the Right to Food: A Tool for Legal Action' originally written by Yamini Jaishankar and Jean Dreze for the Right to Food Campaign Secretariat in 2005. It has

been subsequently revised by Biraj Patnaik and Spurthi Reddy in September 2007. The segment on starvation and the detailed annexures on verbal autopsies and other methods to verify starvation are drawn entirely from an excellent document 'Guidelines for Investigating Suspected Starvation Deaths', prepared by the Jan Swasthya Abhiyan's Hunger Watch Group, based on a consultation organized in Mumbai in 2003<sup>1</sup>. In writing the segments reviewing famine and scarcity codes, past and present, I have received valuable research support from M.Kumaran and learnt much from the painstaking reviews undertaken of some of these Codes by Sana Das<sup>2</sup>. The research in preparing this volume is supported by a research grant from Dan Church India.

This is only a preliminary discussion document, and will no doubt be refined and greatly improved by extensive consultations.

Harsh Mander

Centre for Equity Studies

December, 2007

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<sup>1</sup> 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 Economics, University of Mumbai), Sanjay Rode (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).

<sup>2</sup> Sana Das undertook these reviews for Action Aid India in 2001

## Contents

## **Chapter 1**

### **Famine Codes, Past and Present: A Review**

In contemporary India, there remain large gaps in the statutory codification of the claims and entitlements of people from the State for realising their right to food, in normal times, but also in periods of both acute food distress and in situations of chronic food deprivation, acute denials being the result of natural and human disasters, and chronic deprivations the more routine denial of sufficient food for a healthy and active life even in normal times.

During episodes of food scarcity caused by drought and failures of the rains, district authorities in many regions of the country are still substantially guided in crafting their responses by locally updated, adapted and amended versions of the Famine Codes that were initially developed by colonial administrators. These Codes detail the duties of governments in such times of great human distress, and the operational strategies that should be adopted by them when confronted by these challenges. These remarkable, almost legendary documents were compiled by colonial rulers to regulate the declaration of food scarcity and famines based mainly on sample field crop assessments, and to inform the range of subsequent administrative measures required to be taken by local administrations to address the impacts of food scarcities as and when they occurred.

However, an enormous amount of water has flowed through the Ganga in over a century since many of these Codes were written. Among the epochal changes that have occurred in the context of these Codes, some of the most significant include that India has since become an independent democratic socialistic republic. The nature of food scarcities has dramatically transformed from cataclysmic events leading to the loss of enormous numbers of life due to starvation, to periodic local scarcities precipitated a range of factors such as by failures or fluctuations of monsoon, of forest produce and agricultural prices, with very little loss of life but otherwise considerable human tribulation; and the persistence even in normal times of endemic hunger and widespread malnutrition, especially among children, particularly those in very difficult

circumstances, disabled and infirm people, and old people without care-givers, single women in particular and women in general, and socially most vulnerable groups such as SCs (or dalits), STs (or adivasis), minorities, urban slum dwellers and homeless people. The Indian Constitution recognises the right to life as a fundamental right, and many regard this to include the right to food and work with dignity. A conditional statutory guarantee to the right to work has been created by the National Employment Guarantee Act, 2005. India is also signatory to a number of international covenants, including those of economic, social and cultural rights and those related to gender justice and child rights. The realisation of these rights is closely monitored by activist people's organisations, often in alliance with an activist judiciary. The State is committed to affirmative action for most vulnerable groups, such as SCs, STs and women, to decentralisation of governance to local bodies, and transparency and accountability through powerful right to information legislation. The Indian government runs some of the largest food assistance programmes in the world, including direct food and income transfers; procurement of foodgrains at support price, storage of buffer stocks to prevent shortages and shocks, and sale of subsidised grain in a nation-wide network of shops; and wage employment through public works, which as observed was recently converted into a qualified legal guarantee.

This paper will try to briefly summarise some of the major policy debates relevant to this vastly altered context of Famine and Scarcity Codes, and track both the continuities and departures in these discussions and practices from colonial to present times. It will argue in favour of the careful and comprehensive codification of statutory and judiciable duties of public authorities to secure the right to food of all citizens at all times. These should apply firstly to spells of acute food crises caused by periodic local scarcities (spurred by monsoon failures or natural and human made disasters), but also other caused by other adversities for farmers such as large unfavourable fluctuations in agricultural prices, or failures of forest produce which could be critical for tribal and other forest dwelling communities. However, it will contain measures to address endemic hunger and starvation, unlike both colonial and contemporary Codes (also called manuals or handbooks), all of which exclude responding to everyday hunger

endemic to the lives of many dispossessed communities, social categories, households and individuals. It will propose some principles that it suggests should inform the codification of State duties, practices and procedures for assessing and dealing with food scarcity and endemic hunger, in conformity with democratic values, a rights based approach, gender, social and class justice, and accountability and right to information.

### **Famine Codes: Continuities and Changes from Colonial Times**

During the eighteenth and nineteenth centuries, the people of India were ravaged by a series of cataclysmic famines, precipitated less by failures of nature and more by colonial policies, such as of rack-renting, both legal and illegal, neglect of agriculture, 'free-trade' policies and additional levies for wars. There are terrifying contemporary accounts of these famines, such as of rivers 'studded with dead bodies'<sup>3</sup>, of whole settlements being wiped out by hunger and epidemics that followed in their wake, of desperate loot and plunder, and the cumulative tragic loss of a numbing 15 million women, men and children<sup>4</sup>. Initially the colonial government had no cohesive policy to deal with these emergencies, except to prevent hoarding and crime, which was followed by ad hoc relief measures such as stray food kitchens, poorhouses and public works<sup>5</sup>. It was the Famine Commission appointed in 1878 which resulted in the first Famine Code (based substantially on one which had been written by Elliot in 1883 for Mysore) being adopted as a national model<sup>6</sup>, and to be suitably adapted in different regions of British rule. These Codes evolved under the influence of 2 subsequent Famine Commissions in 1898 and 1901, to provide comprehensive institutionalised guidelines to colonial administrators. These included instructions to anticipate famines, and to save life but

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<sup>3</sup> Alamgir, mohiuddin, "*Famine in South Asia, Political Economy of Mass Starvation* ", Cambridge, Massachusetts, Oelgeschlager, Gunn & Hain Publishers Inc, 1980, p 48,64.

<sup>4</sup> GoI, "*The Drought of 1987. Response and Management, Volume 1, National Efforts*", Edited by D.C. Mishra, Dept. New Delhi, of Agriculture and Co-operation.

<sup>5</sup> Alamgir, mohiuddin, "*Famine in South Asia, Political Economy of Mass Starvation* ", Cambridge, Massachusetts, Oelgeschlager, Gunn & Hain Publishers Inc, 1980, p 63-65.

<sup>6</sup> Ibid, p 73

explicitly at the lowest possible cost to the exchequer, by providing employment at subsistence wage, and 'gratuitous' relief to the 'unemployable'.

In independent India, state governments variously adapted and amended these Famine Codes. In states carved out of the former Bombay and Central provinces – Maharashtra, Gujarat, Madhya Pradesh and Chhatisgarh – these were renamed Scarcity Relief Manuals, scarcity being defined as a marked deterioration of the agricultural season due to failure of rains or floods, or damage to crops due to insects resulting in severe unemployment and consequent distress among agricultural labour and small cultivators<sup>7</sup>. Orissa wrote and adopted its Relief Code in 1971, updating the Orissa Famine Code of 1930, and further updated it in 1996. The Madras Famine Code has remarkably not been amended since 1901. In many states, these exist in the form of administrative circulars and government directives, which have tinkered with the Codes but not substantially rewritten these to reflect the imperatives of a democratic polity. The Andhra Pradesh government used the colonial Madras Code to guide its district officers until 1981, when it drew up its own Handbook on Drought<sup>8</sup>, which builds substantially on the Madras Code. The Andhra Pradesh Handbook was further updated in 1995.

In their objectives, many of these Codes, manuals or handbooks make significant advances on their colonial predecessors. The Orissa Code expands its mandate to go beyond mere relief in crises to the 'maintenance of a certain standard of economic health of the people', whereas the Madhya Pradesh Code aims to prevent physical deterioration and loss of morale of its people because of unemployment, to enable them to restore their ordinary pursuits when better times return<sup>9</sup>. But as we shall observe, most Codes do not live up to such aspirations, let alone to the duties of a democratic State to its vulnerable citizens as pledged in its Constitution, and are severely

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<sup>7</sup> GoI, *"The Drought of 1987. Response and Management, Volume 1, National Efforts"*, Edited by D.C. Mishra, Dept. New Delhi, of Agriculture and Co-operation.

<sup>8</sup> Ibid

<sup>9</sup> Das Sana, *A Critique of Famine Codes in India: A study of the Orissa Relief Code & Vulnerable People's Entitlements*", New Delhi, Action Aid, 2001, p 22.

handicapped also because they are not backed by consistent and sufficient fiscal and administrative arrangements. I believe that the shadow of the values of colonial administration continues to fall long on the culture and practices of the bureaucracy, even 60 years after freedom. In this section, it is these many paradoxical and unacceptable continuities in public policy and practice related to drought and scarcity relief from colonial times that I will try to trace here, while acknowledging also the many ways in which we have traversed in more progressive directions in the journey of protecting our people from want.

- (i) *Codes are non-enforceable:* All famine, drought and scarcity Codes, both colonial and contemporary, cannot be enforced in any court of law. They lay down duties of various public authorities, but contain no provisions that enable citizens (or subjects) to take these authorities to court, or to penalise them, if they fail in performing these duties, even if this leads to the preventable death and suffering of people. In other words, the Codes are not rights based, in that they do not create legal entitlements, and still depend in the last resort on the will of the State to act in specific ways. In colonial times, the timing, nature and extent of State support of people affected by drought and famine, depended on the 'benevolence' of the State, which was guided by considerations of doing the least that was necessary for containing unrest and crime born out of the desperation of mass hunger. It may be argued with merit that democratic polities hold State authorities accountable through the electoral process, and this binds them to their duties. But it is also true that the permanent bureaucracy that continues to be charged with most responsibilities under these Codes never faces elections, and further the people who are most in need of State assistance are often also most powerless and often practically disenfranchised, and therefore cannot influence electoral outcomes in any substantial way.

In recent times, some related rights have been turned into legal entitlements, most importantly by the National Rural Employment Guarantee Act, 2005

(NREGA) which provides a statutory guarantee to every rural family that demands 100 days of wage employment at statutory minimum wages a year. The State cannot plead fiscal or administrative constraints in providing such employment, and there is even a token fine on the public exchequer for failures to provide work in the legally prescribed time. The Supreme Court has also converted government schemes of school meals and supplementary nutrition for infants, small children and nursing and expectant mothers into legal entitlements in the writ petition 196 of 2001, PUCL vs. the Union of India and others. But the entire Code should be legally enforceable to create legally binding duties of State authorities towards people who are living with threats to their lives because of denials of food and livelihoods, including clear accountability lines and penalties for failures.

(ii) *Minimalising Relief Expenditures:* British Codes were explicit in casting a duty on public officials to spend the *minimum* that was necessary, only to prevent the loss of lives, and nothing beyond that. The 1941 Bengal Famine Code, for instance, puts it starkly: 'Government is obliged to limit its assistance to what is absolutely necessary for the preservation of life. When life is secured, the responsibility to the afflicted ceases and the responsibility to the tax paying public begins'<sup>10</sup>. Administrators were warned not to undertake relief works on such a lavish scale as to impair thrift and self-reliance among the people and the structure of society<sup>11</sup>.

This minimalising of relief was accomplished in part through a series of stern 'tests' of the desperation and urgency of want, to discourage all but those unfortunate persons who were most in most drastic need to report for work: the first of these so of distance, that the work should be far away from one's home so as to make it unattractive; the 'residence' test, under which they were required to live at the work site for the duration of their employment away from their families; and the 'labour' test, by which the work was

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<sup>10</sup> Govt of Bengal, "*Famine Manual*", Bengal, Revenue department, 1941, p 3

<sup>11</sup> Das Sana, *A Critique of Famine Codes in India: A study of the Andhra Pradesh Handbook on Drought management & Vulnerable People's entitlements*", New Delhi, Action Aid, 2001, p 21.

required to be monotonous, arduous and compensated at very low wages, carefully calibrated to ensure that it enables nothing more than the purchase of bare essential food<sup>12</sup>. Men engaged in hard labour were paid enough to buy 1.5 pounds of food grains a day (and little else) which amounts to 2500 calories, women 'a little less', and working children from 7 to 12 years half the male rate. (Paper 1, 6) Despite the fact that children laboured even at such a young age in famine works, British commentators like Blair describe the multitude of children 'the bugbear of famine relief-works'<sup>13</sup>, even though most children above 7 years were also required to work. One result of this minimalist approach to levels of relief meant that households could not save anything from their wages, and therefore suffered 2 or 3 months of negligible access to food between the closure of relief works and the next harvest (Paper 1, 6). All efforts to expand the wages and duration and improve and humanise the conditions of work were rejected peremptorily as wasteful.

At one level, much has improved since Independence. There is a positive continuity with the past in the reliance on public works for ensuring adequate food to households in such trying times. Enduring small public works closer to the homes of people affected by scarcity are now recommended (Most Codes require the works to be located at less than 5 kilometres from the place of residence), and there is legislation to ensure equal wages for men and women and for banning child labour (although some field studies report that children continue to be observed in some relief works, helping their parents<sup>14</sup>. Test works to verify need are discontinued in states like Andhra Pradesh and Orissa, although the colonial practice persists in Rajasthan.

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<sup>12</sup> Singh, K.S, "Famine and Society" in "*Water Project Series*", Edited by Jean Floud and Amrita Rangasami, New Delhi, The Indian Law Institute, 1993.

Dubhashi, P.R, "*Drought and Development*", EPW, March 28, 1992.

<sup>13</sup> Blair, Charles, "*Indian Famines their Historical, Financial & Other Aspects*", New Delhi, Agricole Reprints Corporation, 1986, p.170.

<sup>14</sup>Das Sana, *A Critique of Famine Codes in India: A study of the Andhra Pradesh Handbook on Drought management & Vulnerable People's entitlements*", New Delhi, Action Aid, 2001, p 70

But wages are still fixed at bare subsistence levels, just sufficient for survival of the person and dependents. Scarcity and Drought Codes of most state governments today still contain no provision for raising wage rates in times of great distress. Instead they actually reduce it on the specious grounds of reaching larger numbers<sup>15</sup>. The Rajasthan Code (paragraph 83) explicitly states that the principle of the famine wage scale is to pay the lowest amount that is sufficient to maintain a healthy person in health. The Orissa government is an exception, and it has authorised Collectors to enhance wages up to 20 per cent in times of dire need.

Workers in practice (in relief and even NREGA works in most locations in the country) are paid on not just the basis of daily attendance, but on the amount of work done<sup>16</sup>, an illegal and exploitative 'double whammy'. The worker cannot leave if the work required is completed early, and is not paid more if more work is done; in effect, the minimum wage is also the maximum wage<sup>17</sup>. Workers are in practice found to be paid less than minimum wages in public relief works, which has been challenged in a series of public interest petitions in the higher courts. A landmark case was Sanjit Roy vs. the State of Rajasthan (1983), in which the Court held that payment of wages that were lower than statutory minimum wages to people in famine relief works violated the Constitutional right to equality, and the state government should not take advantage of the helplessness of people living in conditions of drought and scarcity. It deemed such work at wages lower than minimum wages to be forced labour, punishable under law.

Standards such as shades and crèches for children and clean drinking water at work sites continue to be mostly neglected, although the Rajasthan Code

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<sup>15</sup> Ibid p 46

<sup>16</sup> Singh, K.S, "Famine and Society" in "*Water Project Series*", Edited by Jean Floud and Amrita Rangasami, New Delhi, The Indian Law Institute, 1993.

<sup>17</sup> Das Sana, *A Critique of Famine Codes in India: A study of the Andhra Pradesh Handbook on Drought management & Vulnerable People's entitlements*", New Delhi, Action Aid, 2001, p 158.

lists a number of required on-site facilities and workers benefits. These include the right to a healthy and sanitary environment, shelter if the site is distant from the village, clean water and even 3 weeks of maternity allowance.

In no Code is work guaranteed to all who seek it, and in fact it the Rajasthan Famine Code actually applies ceilings. NREGA is a great step forward, but it is still a conditional and not open ended guarantee, which applies to one person in each rural family, with an upper limit of 100 days. Public works continue to be closed before the onset of the rains, rather than with the reaping of the harvest, as in colonial times, and these can be times of the most severe food deprivation. This timing is specifically laid down in many Codes, such as the Andhra Pradesh Handbook. Indeed, it has been observed that even NREGA works are closed when rains start (and many state governments have issued written orders to this effect, even though these contravene the law, which requires works to be run whenever there is a demand by workers for them). It can be speculated that this is done in order to keep agricultural wages depressed during the agricultural season, to benefit larger farmers. Agricultural wages are typically well below the statutory minimum wage, and if workers have options to higher wage employment in public works, it would force farmers to offer higher wages.

In some of the major scarcities and droughts from the 1960s to late 1980s, there was relatively greater fiscal freedom to local officials to respond to actual demand for work, but from early 1990s, relief works are seriously constrained by resources, and only minimalist interventions are permitted. The NREGA rectifies this with its significant scale and recent expansion to all districts of the country, but it still is not an open ended guarantee, ensuring not more than 100 days of work for one person in each rural family a year, regardless of the specific exigencies of emergency situations.

(iii) *Culture of Denial*: In colonial times, there was a culture of official denial, of 'masking famines' and indeed of often blaming the victim. I would suggest, maybe provocatively, that such a culture survives in milder and disguised forms even in contemporary India. A drought or failure of monsoon may trigger famine, but it is not in itself the cause of the famine. Students of famine suggest that bureaucracies tend to 'mask' famines first as separate episodes of mass deaths rather than ongoing processes of pauperisation, denial and inequality; and second see these as the unfortunate outcome of rainfall shortfalls, floods or other production failures, as acts of nature for which there is little human responsibility. These create the normative framework of minimalist interventions, mainly in the short-term character of crisis management<sup>18</sup>.

Droughts may not result in serious food scarcity situations and famines if people have enough food reserves and opportunities for employment at fair wages<sup>19</sup>. IFPRI, in a major study of food scarcity in sub Saharan Africa concludes that 'production failures caused by drought, even those lasting several years, do not translate into famines unless other socio-economic conditions are prevalent' that are usually the direct result of failures of public policy. These include policies on agricultural technology, the scarcity of non-farm technologies, lack of savings, poor public health facilities and lack of infrastructure<sup>20</sup>. It is therefore appropriate to describe the Codes not as drought manuals (as is done, for instance in Andhra Pradesh), but as scarcity manuals (which is the name in Maharashtra and Madhya Pradesh) because this at least tacitly admits to scarcity that occurs due to factors that may extend beyond natural failures like drought and floods. New forms of agrarian distress have also surfaced in the form of farmers' suicides, which

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<sup>18</sup> Floud and Rangasami, "The Masking of Famine: The Role of the Bureausracy", in *Famine and Society*", Edited by Jean Floud and Amrita Rangasami, Water project Series, New Delhi, The Indian Law Institute, 1993.

<sup>19</sup> Das Sana, *A Critique of Famine Codes in India: A study of the Andhra Pradesh Handbook on Drought management & Vulnerable People's entitlements*", New Delhi, Action Aid, 2001, p 16

<sup>20</sup> Von, Braun, "A policy Agenda for Famine Prevention in Africa", Washington D.C, IFPRI, 1991.

have spread like an epidemic through many parts of rural India, resulting from exploitative private credit, cost intensive agricultural technologies and forced unprotected integration into global markets. Codes provide for remission of loans from the formal banking sector, but leave untouched usury by the private moneylender.

Blaming the victim was explicit, even racist, in many colonial records. I can do no better than quote Charles Blair, an Executive Engineer of the Indian Public Works Department who writes in 1874 of the 'bigotry, fatalistic attitudes, apathy, or any of the other subtle influences that prevail in the East (which) was the cause of the sufferers concealing their necessities, or of refusing proffered work, wages, or food...' <sup>21</sup>. He quotes a journalist of the Daily News covering the great Orissa famine of 1866, who wrote, '*Kismet!* It is their fate: it has been the fate of their forefathers, of their caste, from times immemorial, to toil when toil and wage are offered; to hunger and to starve when wage and food failed them <sup>22</sup>.' He even suggests duplicity, 'Able-bodied men who were offered work would refuse it, and would sit under a tree till they got thin enough to get gratuitous relief' <sup>23</sup>.

Denials of starvation by public officials today are not often so openly racist, but they still routinely blame the alleged wanton neglect of their health of especially tribal folk due to superstition and ignorance as the cause of many deaths which activists and journalists claim are starvation deaths, and claim an indolent preference for relief rather than self-reliant and self-respecting honest toil. The Bombay Sanitary Commissioner of 1880 attributed mass deaths to cholera, measles, small pox, malaria, diahorrea but tellingly left out starvation. The same happens today when starvation deaths occur. Census data also is never allowed to reflect deaths due to starvation or migration due

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<sup>21</sup> Blair, Charles, "*Indian Famines their Historical, Financial & Other Aspects*", New Delhi, Agricole Reprints Corporation, 1986, p.85.

<sup>22</sup> Ibid, p.107.

<sup>23</sup> Ibid, p.106.

to intense food scarcity<sup>24</sup>. There is also a neglect of psycho-social care, as well as rehabilitative measures for survivors in Codes, past and present, suggesting an indifference to the enormity of human suffering associated with mass and individual hunger.

- (iv) *Weak Early Detection Systems:* The persisting view of scarcity as the outcome mainly of natural failures, especially of rainfall, is that Codes today as in the colonial past, continue to depend on diagnosing 'scarcity' principally on the basis of sharp shortfalls in total rainfall, and in agricultural production. The latter is measured by processes prescribed in the Codes and variously described by terms such as *annawari* or *paisawari*. Crop-cutting data, or sample checks of production compared with the average production, is required, for instance, in Rajasthan, Andhra Pradesh and Orissa. In Orissa, drought is declared when there is 50 to 75 per cent damage loss in paddy, *ragi* and maize crops, which are the basic cereal crops of the area. Unlike Andhra Pradesh, the Orissa Code does not recognise irregular spacing of rain as contributory to drought.

The complicated and long drawn out administrative procedures (sometimes called 'crop-cutting experiments') seek to assess whether crop production in particular regions of specific mainly food crops are alarmingly below the average for that region and crop. These tests are possible only at the time when crops are ready for harvest. One outcome of this is that drought is declared well after the neediest people have migrated and pulled back on their food intake, usually only late in December of the year in which rains have failed, or even later. The Orissa Code contains a very progressive provision, that allows government to start labour intensive works even before drought is formally declared, but this is rarely acted upon.

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<sup>24</sup> Rangasami, "The Masking of Famine: The Role of the Bureausracy", in *Famine and Society*", Edited by Jean Floud and Amrita Rangasami, Water project Series, New Delhi, The Indian Law Institute, 1993.

Up to the late 1980s, when large scale scarcity relief works, employing sometimes more than one lakh persons daily in a district were still the norm in many regions like Chhatisgarh and Rajasthan, the declaration of scarcity used to be an intensely politically fraught process, and District Collectors were frequently placed under great informal pressure even to fudge these statistics, in order to entitle the district to large funds for relief works. I have observed first hand that such political pressure frequently arose from lobbies of contractors, bureaucrats and politicians, rather than from impoverished people.

There are many problems with these outmoded methods of early diagnosis of impending food scarcity. Not only do they lend themselves to manipulation, but they establish scarcity only when it is well on the way, and therefore is less preventive and more enabling of fire fighting after much avoidable suffering is already under way. They neglect many early signals of distress and decline into destitution, such as changes and reduction in food intake, distress migration and sale of assets, distress wages and so on. They overemphasise rainfall failures, and neglect rainfall variations which may be more damaging to crop production, but also price fluctuations that can be devastating for farmers producing for an increasingly globalised market, damage to forest produce such as *mahua* or *tendu* leaf, on which local populations may be more dependent, or the flowering of bamboo, or fall in water table and consequent drying up of sources of drinking water<sup>25</sup>.

The Andhra Pradesh Handbook includes not only unusual migration of people and herds but also many offbeat and socially insightful early signs of scarcity, such as decline in rail travel and festival participation, increase in crime and consumption of liquor. But in practice, relief works are still linked

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<sup>25</sup> GOI “*The drought of 1987, Response management, Volume 1, National Efforts*”, Edited by D.C. Mishra., Newdelhi, Dept. of Agriculture and Co-operation, Ministry of Agriculture.

only to rainfall failures or aberrations<sup>26</sup>. A 3 year average is taken as the baseline, but this is misleading in chronically drought prone districts, where the baseline is itself too low to secure rural well-being. The Handbook does not recognise failure of non timber forest produce as a source of drought, which discriminates against the food survival needs of the poorest forest dependent communities.

- (v) *Neglect of non-farm rural poor, nomadic and migrant workers:* The Famine Codes of the past recognised that non-farm rural poor persons, like artisans and weavers, may be very hard hit by famine, but did little to address their food needs, even while recognising that they were not equipped physically and culturally to participate in the kind of manual labour that is required in public relief works. This required the design of public works that catered to their specific skills. This was never done, except for casual references in some public documents of those times to the effect that the distribution of cloth as part of gratuitous relief would hopefully create some opportunities for work for weavers. Although weavers and other artisans continue to suffer enormous setbacks today, even more so because of their highly unequal integration with global markets, and reports pour in of both starvation and suicides by weavers, they are neglected in even in contemporary Codes. The Andhra Pradesh Handbook, for instance, contains just one section that requires the listing of village artisans affected by drought, but follows this with no specific relief. The Rajasthan Code provides for loans against collateral for *ambar charkhas* (or modified spinning wheels) for weavers, with no provision for marketing or to ensure them a daily living wage during the period of scarcity.

In many regions like Rajasthan, nomadic pastoral communities migrate to survive scarcity. British administrators were averse to what they saw as

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<sup>26</sup> Das Sana, *A Critique of Famine Codes in India: A study of the Andhra Pradesh Handbook on Drought management & Vulnerable People's entitlements*", New Delhi, Action Aid, 2001, p 68.

'aimless wandering' and found it potentially socially disruptive, therefore they discouraged it. These attitudes persist, and efforts are constantly made to 'settle' these communities<sup>27</sup>. The shrinking of commons and curbing of forest rights and access have led to reduced pastures and fodder availability to pastoral communities dependent on livestock. This has led to still greater dependence of these communities on State support for their fodder needs, and various Codes include provisions for cattle camps and *gaushalas* for starving cattle in times of acute scarcity<sup>28</sup>, but the scale remains small, and the needs of these communities remains substantially unaddressed both in situations of crisis. The Andhra Pradesh Handbook, for instance, provides for cattle camps where starving cattle are fed at government expense, and fodder banks which supply farmers cattle feed at half cost, but there is no special focus in any of this for the specific protection of the small pastoralist and farmer. Besides, there is no assurance that these camps will actually be started, and if so when, therefore affected people do not know whether or not they should migrate<sup>29</sup>.

Distress migrants to cities, both in normal times of want and in extraordinary emergent situations of food scarcity, are again neglected both in Codes and contemporary food schemes. Because they are not of local residence in places where they migrate, they are routinely deprived of ration cards; they have to buy food from private shops in an unfamiliar market, and they have been found to buy broken rice fit only to be fed o cattle; their children are debarred entry into ICDS feeding centres, and from schools both to access education and mid day meals; women are denied maternity benefits as well as the services of ICDS, and aged and disabled people their pensions. These problems are aggravated in instances of migration between states, where the

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<sup>27</sup> Kavoori, Purnendu, *"The social Distribution of Land and the Variable Significance of Migratory Pastoralism in the Ecological context of Drought: Interpreting Some Evidence from Western Rajasthan"*, Jaipur, IDS.

<sup>28</sup> Singh, K.S, "Famine and Society" in *"Water Project Series"*, Edited by Jean Floud and Amrita Rangasami, New Delhi, The Indian Law Institute, 1993.

<sup>29</sup> Chattopadhaya, Boudhan, " Food Security and the Social Environemnt-Food Systems and the Human environment. Vol 1, Calcutta, Cressida Research Team, K.P Bagchi Co, 1991.

host state refuses to expend its resources for migrants who have come to it in search of work, often in semi-bonded conditions. The Andhra Pradesh Handbook, as well as the Rajasthan Code, is silent about the food needs of migrants from other states. At the same time, their rights and those of their dependents need to be protected at the places of their origin as well. The Andhra Pradesh Handbook assures entitlement to women, children and the aged who are left behind when able bodied members migrate, to gratuitous relief and supplementary nutrition.

(vi) *Gratuitous Relief and Social Security:* Gratuitous relief is the provisioning of food, cash or other life needs like clothes without requiring labour or collateral from the people who receive this form of relief. British relief policy haltingly incorporated programmes of gratuitous relief for persons who were physically incapable of working on relief sites (or were culturally barred because of *pardah* and 'high' caste). There was provision in the Bengal Relief Code<sup>30</sup> for instance, to 'distribute such gratuitous relief, in the forms of money or food, as may be necessary' and to 'open and maintain such temporary hospitals, poor houses, orphanages, and places for the gratuitous distribution of food as may be necessary'. The quantum of assistance and numbers thus served, however, were severely restricted.

In independent India, in some major scarcities, large community kitchens were set up and dry rations distributed, but by and large these have been found inessential in the changed nature of mass food scarcity. The Andhra Pradesh Handbook contains provisions for gruel kitchens and relief camps, but the quantum of assistance is not specified, and these are rarely set up. The rules themselves exclude those who benefit from pensions and other schemes, neglecting their enhanced needs in such times, and there is no special targeting of single women and children. An excellent feature is to feed dependents such as children and old people of those who migrate, which is

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<sup>30</sup>Govt of Bengal, "*Famine Manual*", Bengal, Revenue department, 1941, p 4

sorely needed but not found in Codes like Orissa, but there are no operational details and much of this remains on paper<sup>31</sup>. The Orissa Code also specifically includes out of school children for feeding, and people who may have migrated from other district or place. The Rajasthan and Orissa Codes continues to use outdated and politically incorrect derogatory terms like idiots, the insane, the crippled and women of 'respectable birth' (as though those born into disadvantaged castes are not respectably born!) to list those entitled to gratuitous relief, but more gravely they leave large gaps in coverage of people in need, and frequently do not in practice provide such assistance at all<sup>32</sup>.

It may be argued that 'gratuitous' relief as a form of State charity has given way gradually to social security as rights, the public distribution system (PDS), to entitlement feeding programmes like the ICDS, mid day school meals and pensions for aged and disabled people and widows. However, these are rarely adapted to the special needs created by situations of food scarcity, except for stray instances such as recent orders to distribute meals to school going children at schools even during vacations, in districts reeling under drought. But even this was not by executive order, but by intervention by the Supreme Court in the writ petition 196 of 2001, PUCL vs. the Union of India and others. A large emergency feeding programme introduced in the 'KBK' districts of Orissa infamous for endemic hunger, again at the intervention of the statutory National Human Rights Commission. The Andhra Pradesh Handbook directs that care should be taken to ensure adequate stocking and functioning of PDS shops in drought areas, and doubles the allocations for drought affected populations. But PDS targeting introduced from 1996 excludes many needy persons, and even the double allocation is less than the minimum prescribed by the Supreme Court even for normal times, namely 35 kilograms per family per month. It ranges

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<sup>31</sup> Das Sana, *A Critique of Famine Codes in India: A study of the Orissa Relief Code & Vulnerable People's Entitlements*", New Delhi, Action Aid, 2001, p 76.

<sup>32</sup> Das Sana, *A Critique of Famine Codes in India: A study of the Rajasthan Relief Code & Vulnerable People's Entitlements*", New Delhi, Action Aid, 2001, p 16

instead between 10 and 16 kilograms. It does not place a discretionary stock of 2 quintals of grain with the Sarpanch for immediate intervention to prevent starvation, as is provided for in both Orissa and Rajasthan (one quintal). But even in these states, this amount is token, barely sufficient to meet the scale of need.

The Andhra Pradesh Handbook<sup>33</sup> describes drought as a 'creeping disaster', leading to invariable food shortage, and especially high infant mortality. It provides for supplementary feeding to children below 15 years, to pregnant and lactating mothers, and old people. The Orissa Code excludes the last. The Rajasthan Code mentions only 'famine orphans' for special feeding. With the universalisation of ICDS and mid day meals, there is need now for greater convergence with food schemes of normal times, and for augmenting these with higher allocations per head in times of scarcity, and inclusion of left out groups like out of school children for mid day meals. The Andhra Pradesh Handbook also is sensitive to the exclusion and higher food vulnerability of SC ST populations, and therefore directs that these are located in SC ST villages, as well as slums. The Orissa Relief Code provides for 3 kinds of gratuitous relief: emergent (in natural disasters like cyclones but not droughts), ad-hoc (food and clothes for a maximum of 15 days); and 'on cards' (where crop loss is more than 50 per cent). The last is amore enduring entitlement, enabling them to access cooked food from on-going feeding programmes, but studies have shown that in practice large numbers are excluded from these schemes like emergency feeding<sup>34</sup>. The Rajasthan Code does not provide for emergent relief, but gratuitous relief can be given to those unable to work who are not getting pensions. But like in other states, this is rarely operated. This was a spur for the PUCL to file a petition on the right to food in the Supreme Court in 2001, to which reference has already been made (196 of 2001, PUCL vs. the Union of India and others).

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<sup>33</sup> Das Sana, *A Critique of Famine Codes in India: A study of the Andhra Pradesh Handbook on Drought management & Vulnerable People's entitlements*, New Delhi, Action Aid, 2001, p 68.

<sup>34</sup> CENDERET "*The Murky twilight: An Unending Quest for Survival, Bolagir Drought-2001*", Orissa, Western Orissa Resource Centre, Xavier Institute of management.

The State also mostly persists in the characterisation of vulnerable people with special needs as, in effect, unemployable. It overlooks the fact that most disabilities are social rather than biological constructions, and schemes can be sensitively designed for the dignified employment of disabled people, single women and aged people, but these have to break out of the overarching model of conventional public works. The Rajasthan Code specifically debars disabled people from employment in relief works, and at the same time (in violation of the law) permits children to labour in relief works<sup>35</sup>.

There is also the continuous preoccupation in separating out the 'deserving' from the 'undeserving' poor. This finds echoes in even in the mandate of free India's Constitution (article 41) which enjoins the State to secure the right to work, to education, and to public assistance in cases of unemployment, old age, sickness, disablement, and in other cases of 'undeserved want'. The notion that some bring penury and destitution upon themselves or that they somehow deserve it is, however, questionable, because of the complex ways in which social inequities come to bear on individual actions.

(vii) *Neglect of Starvation, Malnutrition and Chronic Hunger*: British famine policy limited itself to preventing mass starvation deaths, but ignored the consequences of malnutrition from prolonged food denials, such as succumbing to eminently curable ailments. Today bureaucracies again deny starvation deaths, and do not hold themselves accountable for the deleterious effects of prolonged food denials. Indeed, it is again reiterated that with the end of large scale famines, the most important manifestation of hunger is not in the acute denial of food, associated with famines and scarcities, but with endemic chronic denials as a way of life even in ordinary times, but even more threatened in times of personal, local or larger emergencies. These are

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<sup>35</sup> Das Sana, *A Critique of Famine Codes in India: A study of the Rajasthan Relief Code & Vulnerable People's Entitlements*", New Delhi, Action Aid, 2001, p 9.

people who may not always die of starvation, but they live with it, as an element of daily living. Codes, past and present, do nothing to address these. In fact, in the past, Codes have strictly warned against the 'misuse' of relief by people who live even in normal times with denial.

Many contemporary Codes, such as that of Rajasthan, do not even admit to the possibility of deaths by starvation. Even other Codes like that of Orissa recognise only mass deaths as an indication of famine, and individual starvation is so difficult to prove<sup>36</sup> that in effect it has been banned simply by official decree! The Andhra Pradesh Handbook requires that the Collector gives weekly reports of starvation deaths, but it is completely silent about how such deaths are defined and verified, and the responsibilities to the victim family, psychosocial counselling and rehabilitation of survivors, and the accountability of public officials. The Orissa Code is even more stringent, requiring Collectors to submit a report within 48 hours of a starvation death, but there are no penalties for their failures to do so (despite the fact that such lapses remain the rule rather than the exception). In a landmark judgement in the Kishan Patnaik vs. the State of Orissa case in 1989, the Supreme Court confirmed the veracity of complaints of starvation deaths, but held that it had no reason to disbelieve that the state government was doing all it could to deal with the unfortunate situation.

Government programmes are woefully inadequate to prevent starvation and address destitution. Our evidence is that apart from major leakages and corruption, the coverage of these schemes is so meagre that they leave huge gaping holes in the social security net through which large numbers of most destitute women and men, girls and boys slip through measures to prevent and reverse starvations, or the persistence absolute hunger. It is stressed that this is a duty not to the dead, but to the precariously living. It requires public

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<sup>36</sup> Das Sana, *A Critique of Famine Codes in India: A study of the Rajasthan Relief Code & Vulnerable People's Entitlements*", New Delhi, Action Aid, 2001, p 38-39.

vigilance about individuals, communities and several categories living with starvation and absolute hunger.

Central and state governments do run some of the largest entitlement feeding programmes, distribute subsidised foodgrains through a massive network of fair-price shops, and support vulnerable groups like old people, widows and disabled people, with pensions, and mothers with maternity benefits. Famines in British India were seen as famines of 'work' rather than of 'food', assuming that there was enough food and this could easily be transported to places with scarcity through the network of railways. But the enormous devastation of the Bengal Famine of 1943 exploded this myth, and this contributed in India to the creation of an impressive Public Distribution System, although government has limited its coverage through targeting since 1996. It required the mediation of the Supreme Court in the writ petition in the writ petition 196 of 2001, PUCL vs. the Union of India and others, to convert some of these measures into universal entitlements, such as noon day school meals and supplementary feeding of infant, small children and expectant mothers. 60 years after Independence, a modest pension has been converted into an entitlement of all aged people who are designated poor.

These schemes still fall short of addressing hidden hunger in 3 main ways: a), gender, caste and other social barriers, as well as governance failures such as of corruption and leakages, exclude large numbers of the most needy from accessing these schemes; b) even in times of declared food scarcity, there is no augmenting of these food schemes and entitlements; and c) in the background of denial of a situation of large numbers of people living with starvation even in normal times, they do not recognise the need for special intensive interventions for households that live in conditions of chronic hunger, and of fully excluded groups. An example of the former is that a child from a home with absolute shortfalls of food will still receive supplementary nutrition from ICDS centres, when she actually lacks even

primary nutrition. It is only when she slips into third or fourth grade malnutrition will she be entitled to additional food, but by then her body and brain has already been irreparably damaged. And of the latter, an example is of working, street and disabled children, and children of migrant working families, who are out of school, and therefore denied access to mid day school meals.

*(viii)* **Governance Failures:** It is remarkable that contemporary scarcity manuals and codes, continue to rely principally on the permanent bureaucracy at village, block, district and state government levels, to manage situations of food scarcity, very little different from colonial times. It is not surprising that many state governments therefore face little difficulty in applying Famine Code procedures developed by colonial administrators to a democratic polity. This bureaucracy is not directly accountable to the people democratically; therefore matters literally of life and death, and the onerous responsibilities for preventing enormous human suffering and loss of life, cannot be left alone to the non-elected executive. Panchayats today at best have some role in implementing local relief (as in Madhya Pradesh, Gujarat, Rajasthan and Orissa) but decision making remains in the hands of the bureaucracy. Panchayats and other local bodies need to be drawn into the leadership of all aspects of the management of scarcity, from its early detection to its withdrawal and further prevention. This is not to deny the powerlessness and frequent disenfranchisement of most people who are condemned to live with hunger. But the creation of legal justiciable rights, and organised civic action around these, have been found to slowly build democratic sinews of even the weak in securing their rights, especially to life with dignity.

The procedures and rules under the Codes also remain completely opaque, another continuity with the past. The Codes need to be rewritten in ways that inform and engage with affected people at every stage, from the early

detection of food scarcity, its diagnosis, mitigation and relief strategies including relief works, emergency feeding and other food and survival support to the vulnerable, fodder camps, arrangements for drinking water, and the ending of relief and preventive strategies. All these should be transacted in participatory ways, such that people have the required information and the spaces to be consulted at every turn, to be informed of their rights such as to wages and how they are to be calculated, and to socially audit not just expenditures but also the adequacy of the actions of elected and permanent public officials to deal with the enormous challenges posed by the conditions of food scarcity and denial.

## **Chapter 2**

### **A Scarcity Code for Contemporary Times:**

#### **Suggested Features**

The persisting culture of vigorous official denial that surrounds living and dying from hunger and destitution requires a decisively new Scarcity Code that breaks away decisively from the colonial legacy of Famine Codes, which still influence State response to food scarcity in a range of ways described in the first chapter of this volume. The objectives of such a Code would need to surge much beyond the minimalist agenda of the Codes of the past, aiming just to prevent the outbreak of mass deaths due to starvation in famines at minimum cost to the State exchequer. It would need to contain cast-iron provisions to protect all men, women and children from short and long term food denials, hunger, malnutrition and starvation, both in times of unusual emergency and in more normal times, to enable each of them to secure with dignity their right to assured and adequate food required to lead a healthy and active life.

We have observed that Codes in the past came into force only after major natural disasters, mainly failures of rainfall and consequent disruption of agricultural production. They rarely dealt with starvation and duties of the State to prevent and mitigate it, and also did not deal with right to food in normal times, and the duties to people who live with prolonged denials of adequate food. The relief and protections they afforded to the unfortunate people who lived with acute food denials depended on the will and benevolence of the State, and was severely constrained by budgetary limits, and a limited agenda to prevent mass starvation.

In the light of this discussion, this volume tries to suggest an alternative Food Rights Code, which delineates duties of public authorities to a) ensure the right to food of all people in normal times; b) acknowledge, verify and address individual and mass starvation; c) identify people and groups which live with chronic hunger even in normal times and take special measures to protect them from starvation and secure their rights to food; and d) address emergent situations of food scarcity arising from extraordinary natural, human made and economic situations.

### *Legal Binding:*

The first feature of this Code is that its provisions should be binding on the State: on all governments - central, state and local. It should carry the force of law. This may be achieved through two paths, either by acts of Parliament and state legislatures, or by direction of the Supreme Court of India. It should create not just legal but also moral rights for all people. It must contain measures of enforceability, such as the right to information, grievance redressal mechanisms, participatory monitoring mechanisms such as social audits, and clear lines of accountability of public officials at various levels, including of penalty for failures. It would be appropriate, therefore, to describe these not as Famine, Drought or even Scarcity Codes but as Food Rights Codes.

### *Objectives:*

The proposed objectives of the Food Rights Code are as under:

1. To ensure that all people at all times have assured have physical, economic and social access to sufficient, safe and nutritious food to meet with dignity their dietary needs and food preferences for an active and healthy life.
2. 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.
3. To identify individuals, dispossessed communities, classes and social categories of people who live with prolonged hunger, malnutrition and starvation, and to intervene with short, medium and long term measures to mitigate, prevent and sustainably reverse this situation of chronic hunger.

4. To ensure that emergent situations that threaten mass access to food, such as natural and human made disasters are anticipated, mitigated and addressed with equity and speed, without consequences of mass food scarcities.

In subsequent chapters, each of these objectives will be clarified, including the duties and rights that they create, and the ways in which they can be realised.

## Chapter 3

### Securing the Right to Food of All People at All Times<sup>37</sup>

#### *Objective 1 of the Food Rights Code:*

*To ensure that all people at all times have assured have physical, economic and social access to sufficient, safe and nutritious food to meet with dignity their dietary needs and food preferences for an active and healthy life.*

The Code must first lay down the duty of government at all levels to ensure that all people are able to realise at all times their right to food. The right to food is a human right, inherent in all people, to have regular, permanent and unrestricted physical, economic and social access with dignity, either directly or by means of financial purchases, to quantitatively and qualitatively adequate, assured and sufficient, safe and nutritious food corresponding to the cultural traditions of people to which the consumer belongs, for an active and healthy life<sup>38</sup>.

The legal basis of the right to food has been helpfully spelt by the National Human Rights Commission (NHRC) in the proceedings of a hearing held on 17 January 2003:

“Article 21 of the Constitution of India guarantees a fundamental right to life and personal liberty. The expression ‘Life’ in this Article has been judicially interpreted to mean a life with human dignity and not mere survival or animal existence. In the light of this, the State is obliged to provide for all those minimum requirements which must be satisfied in order to enable a person to live with human dignity, such as education, health care, just and humane conditions of work, protection against exploitation, etc. In the view of the Commission, the Right to Food is inherent to a

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<sup>37</sup> This booklet has been adapted from “Supreme Court Orders on the Right to Food : A tool for Legal Action” originally written by Yamini Jaishankar and Jean Dreze for the Right to Food Campaign Secretariat in 2005. It has been subsequently revised by Biraj Patnaik and Spurthi Reddy in September 2007.

<sup>38</sup> This definition of the right to food derives from and build upon a definition suggested by the UN Special Rapporteur on the Right to Food, 2002

life with dignity, and Article 21 should be read with Articles 39(a) and 47 to understand the nature of the obligation of the State in order to ensure the effective realization of this right. Article 39(a) of the Constitution enunciated as one of the Directive Principles, fundamental in the governance of the country, requires the State to direct its policy towards securing that the citizens, men and women equally, have the right to an adequate means of livelihood. Article 47 spells out the duty of the State to raise the level of nutrition and the standard of living of its people as a primary responsibility. The citizen's right to be free from hunger enshrined in Article 21 is to be ensured by the fulfilment of the obligation of the State set out in Articles 39(a) and 47. The reading of Article 21 together with Articles 39(a) and 47 places the issue of food security in the correct perspective, thus making the Right to Food a guaranteed Fundamental Right which is enforceable by virtue of the constitutional remedy provided under Article 32 of the Constitution."<sup>1</sup>

The relevant Articles of the Constitution are as follows:

**Article 21:** "No person shall be deprived of his life or personal liberty except according to procedure established by law."

**Article 39(a):** "The State shall... direct its policy towards securing that the citizen, men and women equally, have the right to an adequate means of livelihood..."

**Article 47:** "The State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties..."

**Article 32(1):** "The right to move the Supreme Court by appropriate proceedings for the enforcement of the rights conferred by this Part is guaranteed."

Note: Article 32(1) applies to the rights conferred in Part III of the Constitution, known as “fundamental rights”. Article 21 appears in Part III, but not Articles 39(a) and 47. These appear in Part IV, under “Directive Principles of State Policy”.

### *Ensuring Specific Rights to Food in Normal Times*

The Supreme Court of India has elaborated many specific on-going rights to food of specified segments of people in the Civil Writ Petition, PUCL vs. Union of India and Others (No. 196/ 2001).

The schemes that have been covered as food entitlements under this case can broadly be divided into the following categories:

- **Entitlement Feeding Programmes**
  - **Integrated Child Development Services (ICDS)**: Covers all Children under the age of six, pregnant and lactating mothers and adolescent girls. Six essential services are provided as part of the ICDS. These are:
  - **Mid Day Meal Scheme (MDMS)**: Covers all primary school children
- **Food Subsidy Programmes**
  - **Targeted Public Distribution System (TPDS)**: Provides 35 kgs/ month of subsidised food grains at half the cost of the economic price to all families identified as living below the poverty line (BPL families)
  - **Antodaya Anna Yojana (AAY)**: Provides 35 kgs of rice / month @Rs.3 per kilo or 35 kgs of wheat / month @Rs.2 per kilo. This is to around 40% of the poorest of poor families.
- **Employment Programmes**

- **National Rural Employment Guarantee Scheme** (100 days of employment at minimum wages)
  - Sampoorna Gramin Rojgar Yojana (Food for work programme that is being phased out and replaced by the NREGS)
- **Social Assistance Programmes**
    - **National Old Age Pension Scheme** (Monthly pension to all BPL adults above the age of 65)
    - **National Family Benefit Scheme** (Compensation of Rs.10,000 in case of death of bread winner of BPL families)
    - **Annapurna Yojana**: Provides 10 kgs of free food grain for destitute poor who are not covered under the National Old Age Pension Scheme (NOAPS)

## **THE PUBLIC DISTRIBUTION SYSTEM**

### **Background**

The Public Distribution System (PDS) is a means of distributing foodgrain and other basic commodities at subsidised prices through “fair price shops”. Every family is supposed to have a ration card. In 1997, the PDS became “targeted”: wherein different ration cards were issued to households “Below the Poverty Line” (BPL) and those “Above the Poverty Line” (APL), and each category has different entitlements. Today, both BPL and APL households are entitled to 35 kgs of grain per month, but the issue price is higher for APL households. In fact, it is so high that most APL households do not buy grain from the PDS. Thus, in practice the PDS is restricted to BPL households. Even in years when the APL prices correspond very closely with the market prices, the offtake of APL has remained very low since State Governments are not lifting their APL quotas. The Government of India has now reduced the APL quotas for all States and restricted it to the average of the last three years of APL offtake for that particular State.

In 2001 Antyodaya cards were introduced as a sub-category of BPL cards. However, the Supreme Court later stated that the Antyodaya programme should not be restricted to those with a BPL card (see Section 2.3). Thus, Antyodaya cards have become a separate card, distinct from either BPL or APL. Some households also have other cards, such as Annapurna cards (see Section 2.9).

The PDS, like many other large scale food and employment scheme is also confronted with many governance related issues including wide spread leakages and corruption at all levels of operation. The Supreme Court has taken notice of this and formed a Central Vigilance Committee on the Public Distribution System in its order dated 12 July 2006. The CVC (PDS) is chaired by Justice (Retd.) DP Wadhwa with the Commissioner of the Supreme Court, Dr.NC Saxena as the Member-Convenor. The Committee is presently looking into the maladies that are affecting the proper functioning of the Public Distribution System and suggesting remedial measures. The CVC has since submitted its report (August 2007) and it will be taken up by the Supreme Court shortly.

### **Supreme Court Orders**

**1. Identification of BPL families:** On 28<sup>th</sup> November 2001, the Court directed the State Governments “to complete the identification of BPL families, issuing of cards and commencement of distribution of 25 kgs. grain per family per month latest by 1st January, 2002”. Note that the entitlements of BPL families were subsequently raised from 25 kgs of grain per month to 35 kgs.

The Planning Commission announced (in 2004), the BPL percentage population to be at 26%, which would have meant a drastic reduction in grain allocation by the Central Government. However the order of 14th February 2006, directed the central government to allocate food grain on the basis of Planning Commission estimates of 1993-94 poverty rations, which is at 36%. On the BPL list, see also para 6 below.

**2. Accessibility of ration shops and regular supply of grain:** On several occasions, the Supreme Court directed the government to ensure that all ration shops open regularly. For instance, one of the very first interim orders (dated 23 July 2001), states: "We direct the States to see that all the PDS shops, if closed, are re-opened and start functioning within one week from today and regular supplies made." Similarly, an interim order dated 8 May 2002 states: "The respondents shall ensure that the ration shops remain open throughout the month, during fixed hours, the details of which will be displayed on the notice board."

**3. Accountability of PDS dealers:** The licenses of PDS dealers and shop-keepers should be cancelled if they: "(a) do not keep their shops open throughout the month during the stipulated period; (b) fail to provide grain to BPL families strictly at BPL rates and no higher; (c) keep the cards of BPL households with them; (d) make false entries in the BPL cards; (e) engage in black-marketing or siphoning away of grains to the open market and hand over such ration shops to such other person/organizations". Further, "the concerned authorities/functionaries would not show any laxity on the subject".<sup>39</sup>

#### **4. Monitoring of the PDS<sup>40</sup>:**

A Central Vigilance Committee has been constituted to investigate the maladies affecting the proper functioning of the public distribution system, and suggest remedial measures. "For this purpose, the Committee shall, amongst other things, focus on: - a) The mode of appointment of the dealers; b) the ideal commission or the rates payable to the dealer and; c) modalities as to how the Committees already in place, can function better. d) Modes as to how there can be transparency in allotment of the food stock to be sold at the shops."

Apart from this the Committee shall also suggest a transparent mode of appointing PDS dealers; and ways to make the existing vigilance committees more effective.

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<sup>39</sup> Supreme Court Order dated 2<sup>nd</sup> May, 2003.

<sup>40</sup> Supreme Court Order dated 12<sup>th</sup> July 2006

4. **Permission to buy in instalments:** Arrangements must be made to “permit the BPL household to buy the ration in instalments”.<sup>41</sup>

5. **Awareness generation:** “Wide publicity shall be given so as to make BPL families aware of their entitlement.”<sup>42</sup>

6. **BPL list:** Orders relating to the “BPL list” are also relevant to the Public Distribution System, since the BPL list is the basis on which BPL and APL ration cards are distributed. These orders are discussed in Section 2.12. Note in particular that (1) the Central and State Governments have been directed to “frame clear guidelines for proper identification of BPL families”<sup>43</sup> in consultation with the Supreme Court Commissioners<sup>44</sup> and; (2) no-one is supposed to be removed from the BPL list until such time as the Court deliberates this matter.<sup>45</sup>

### Comments

1. The Supreme Court orders on the PDS should be read together with the Central Government’s “PDS (Control) Order” of August 2001. This Order contains sweeping directions for holding FPS managers and others accountable, and should be read in conjunction with the Essential Commodities Act. Taken together, these three sets of orders (Supreme Court orders, PDS Control Order and Essential Commodities Act) can be used quite effectively to ensure that people get their due.

2. BPL targeting has attracted widespread criticism. There is much evidence that the “BPL list” is highly unreliable: well-off households often have a BPL card while poor households have an APL card, if they have a card at all. This is partly because the “BPL

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<sup>41</sup> Supreme Court Order dated 2<sup>nd</sup> May, 2003.

<sup>42</sup> Supreme Court Order dated 2<sup>nd</sup> May, 2003.

<sup>43</sup> Supreme Court Order dated 8<sup>th</sup> May, 2002.

<sup>44</sup> Supreme Court Order dated 14<sup>th</sup> February 2006.

<sup>45</sup> Supreme Court Order dated 5<sup>th</sup> May, 2003.

survey” used for identifying families below the poverty line is fundamentally flawed. This issue has been taken up in Supreme Court hearings from time to time – see Section 2.12 for further discussion.

3. Orders relating to Antyodaya Anna Yojana and Annapurna (see below) are also relevant to the Public Distribution System, since these schemes are implemented through the PDS.

## **ANTYODAYA ANNA YOJANA**

### **Background**

The aim of this scheme, launched in 2000, is to provide special food-based assistance to destitute households. These households are given a special ration card (an “Antyodaya card”), and are entitled to special grain quotas at highly subsidised prices. Today, Antyodaya cardholders are entitled to 35 kg of grain per month, at Rs 2/kg for wheat and Rs 3/kg for rice. Initially, the Antyodaya scheme covered 1 crore families, but this was later expanded to 1.5 crore families and then 2 crore families. Currently, around 40% all BPL families are included in the Antyodaya category.

### **Supreme Court Orders**

1. Orders related to the Public Distribution System also apply to Antyodaya Anna Yojana (AAY), since AAY is a component of the PDS. For instance, the order of 23<sup>rd</sup> July 2001, directing State Governments to ensure regular supply of grain to the ration shops applies to AAY also.

2. The State Governments were requested to consider providing grain free of cost to those who are so poor that they are unable to lift their quota, even at the highly subsidised AAY prices.<sup>46</sup>

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<sup>46</sup> Supreme Court order dated 28<sup>th</sup> November 2001.

3. The Central Government “shall formulate the scheme to extend the benefits of the Antyodaya Anna Yojana to the destitute section of the population”.<sup>47</sup>

4. On 2<sup>nd</sup> May 2003, the Supreme Court declared that all households belonging to six “priority groups” would be entitled to Antyodaya cards. More precisely, the Government of India was directed “to place on AAY category the following groups of persons:

(1) Aged, infirm, disabled, destitute men and women, pregnant and lactating women, destitute women;

(2) widows and other single women with no regular support;

(3) old persons (aged 60 or above) with no regular support and no assured means of subsistence;

(4) households with a disabled adult and assured means of subsistence;

(5) households where due to old age, lack of physical or mental fitness, social customs, need to care for a disabled, or other reasons, no adult member is available to engage in gainful employment outside the house;

(6) primitive tribes.”

5. Possession of a BPL card is not necessary for inclusions in the AAY category. The Central Government was directed to issue guidelines to this effect.<sup>48</sup>

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<sup>47</sup> Supreme Court order dated 29<sup>th</sup> October 2002.

<sup>48</sup> Supreme Court Order dated 20<sup>th</sup> April, 2004.

6. In April 2004, the Court asked the Central Government to direct the State Governments to “accelerate the issue of Antyodaya cards especially to primitive tribes”. Further, “the guidelines issued to State Governments shall be implemented in letter and spirit”.<sup>49</sup>

7. In the order dated 17th October 2004, the State Governments were directed to complete the identification of AAY families and the distribution of AAY cards “by the end of the year”, and to begin the distribution of grain to AAY cardholders “immediately”. Further, the AAY cardholders “should not be made to pay, directly or indirectly, any amount other than what they are liable to pay for the supply taken”.

### **Comments**

The most important order here is the order of 2<sup>nd</sup> May 2003, whereby six “priority groups” are entitled to Antyodaya cards as a matter of right. However, the government is yet to devise (and implement) an effective procedure to ensure that all households in these priority groups are identified and covered under AAY. In the case of (so-called) “primitive tribes”, the task is relatively easy, and in some states at least Antyodaya cards have been distributed to most families in this group. The other groups, however, by and large do not have universal access to the AAY scheme.

### **MID-DAY MEAL SCHEME\***

#### **Background**

As mentioned earlier, the Supreme Court order of 28<sup>th</sup> November 2001 directs State Governments to start providing cooked mid-day meals in primary schools. Every child who attends a government or government-assisted primary school is now entitled to a cooked, nutritious mid-day meal every day.

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<sup>49</sup> Supreme Court Order dated 20<sup>th</sup> April, 2004.

\* For a more detailed discussion of mid-day meals, see *Mid-Day Meals: A Primer*, available from the secretariat of the Right to Food Campaign as well as from the office of the Commissioners of the Supreme Court (the addresses are given in Appendix 2).

The provision of cooked mid-day meals in primary schools is an important step towards the right to food. Indeed, mid-day meals help to protect children from hunger (including “classroom hunger”, a mortal enemy of school education), and if the meals are nutritious, they can facilitate the healthy growth of children. Mid-day meals also serve many other useful purposes. For instance, they are quite effective in promoting regular school attendance, and in that respect mid-day meals contribute not only to the right to food but also to the right to education. Mid-day meals also help to undermine caste prejudices, by teaching children to sit together and share a common meal. They reduce the gender gap in school participation, provide an important source of employment for women, and liberate working women from the task of having to feed children at home during the day. Aside from this, mid-day meals can be seen as a source of economic support for the poorer sections of society, and also as an opportunity to impart nutrition education to children. For all these reasons, the Supreme Court order on mid-day meals has been widely welcome, especially among disadvantaged sections of society.

### **Supreme Court Orders**

So far, there have been two crucial Supreme Court orders on mid-day meals: on 28<sup>th</sup> November 2001 and 20<sup>th</sup> April 2004, respectively. Further orders have been issued from time to time also. The landmark order of 28<sup>th</sup> November 2001 clearly directed all State Governments to introduce cooked mid-day meals in primary schools:

“The State Governments /Union Territories to implement the Mid Day Meal Scheme by providing every child in every Government and Government assisted Primary Schools with a prepared mid day meal with a minimum content of 300 calories and 8-12 grams of protein each day of school for a minimum of 200 days.”

This was supposed to be done within six months. But most State Governments took much longer, prompting the Supreme Court to issue stern reminders to them from time to time (e.g. on 2<sup>nd</sup> May 2003). A series of important follow-up orders were issued

on 20<sup>th</sup> April 2004, to speed up the implementation of earlier orders, improve the quality of mid-day meals, and address various concerns raised in the Commissioners' reports. These orders include the following:

1. **Timely compliance:** "All such States and Union Territories who have not fully complied with the order dated 28<sup>th</sup> November, 2001 shall comply with the said directions fully in respect of the entire State/Union Territory... not later than 1<sup>st</sup> September, 2004."

2. **No charge:** The meal is to be provided free of cost. Money for the meal is not to be collected from parents or children under any circumstances.

3. **Priority to SC/ST cooks and helpers:** "In appointment of cooks and helpers, preference shall be given to Dalits, Scheduled Castes and Scheduled Tribes."

4. **Extension to summer vacations in drought-affected areas:** "In drought-affected areas, mid-day meal shall be supplied even during summer vacations."

5. **Kitchen sheds:** The Central Government was directed to "make provisions for construction of kitchen sheds" and also to contribute to the cooking costs.

6. **Quality improvements:** "Attempts shall be made for better infrastructure, improved facilities (safe drinking water etc.), closer monitoring (regular inspection) and other quality safeguards as also the improvement of the contents of the meal so as to provide nutritious meal to the children of the primary schools."

7. **Fair quality of grain:** In the order dated 28<sup>th</sup> November 2001, the Supreme Court directed the Food Corporation of India (FCI) to "ensure provision of fair average quality grain" for mid-day meals. Joint inspections of the grain are to be conducted by the FCI and State Governments. "If the food grain is found, on joint inspection, not to be of fair average quality, it will be replaced by the FCI prior to lifting."

**8. Extension to Class 10:** On 20<sup>th</sup> April 2004, the Government of India was directed to file an affidavit within three months, “stating as to when it is possible to extend the scheme up to 10<sup>th</sup> Standard in compliance with the announcement made by the Prime Minister.” In response to this, an affidavit was filed by the Department of Elementary Education (Ministry of Human Resources Development) in 2004, but the Court is yet to examine it.

In October 2004, the Court noted that some progress had been made with the implementation of earlier orders on mid-day meals. However the feedback received from the States made it clear that implementation was being held up by a lack of funds in many cases. The Court then directed the Central Government to provide financial assistance of “one rupee per child per school day” to meet cooking costs. The Court also clarified that the responsibility to monitor the implementation of the mid-day meal scheme “essentially lies with the Central Government”.<sup>50</sup> Again, the Court stressed the urgency of the situation and directed that “every child eligible for a cooked meal under the Mid-Day Scheme in all States and Union Territories shall be provided with the said meal immediately”.

### **Comments**

Although the MDMS is now one of the relatively better performing schemes as compared to other schemes, the implementation of these orders has been a long and arduous process, but over time, most State Governments have fallen in line. Today, about 12 crore<sup>51</sup> children are getting a cooked mid-day meal at school every day. However, the quality of mid-day meals remains quite poor in many states: the content of the meal is inadequate, health safeguards are lacking and social discrimination is common. Also, nothing has been done to extend mid-day meals beyond the primary stage. Further action is required to consolidate the gains that have been made and to ensure that mid-day meals live up to their promise.

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<sup>50</sup> Supreme Court Order dated 17<sup>th</sup> October 2004.

<sup>51</sup> Official figures available on the website of the Ministry of Human Resource Development [www.education.nic](http://www.education.nic). for the year 2005-06

## INTEGRATED CHILD DEVELOPMENT SERVICES

### Background

ICDS is the only major national programme that addresses the needs of children under the age of six years. It seeks to provide young children with an integrated package of services such as supplementary nutrition, health care and pre-school education. Because the health and nutrition needs of a child cannot be addressed in isolation from those of his or her mother, the programme also extends to adolescent girls, pregnant women and lactating mothers.

These services are provided through ICDS centres, also known as “anganwadis”. Today there are 8.44 lakh anganwadis in the country, covering 5.8 crore children in the age group 6 months to 6 years.<sup>52</sup> This is less than half of all children in the 0-6 age group<sup>53</sup>[check]. The coverage of ICDS is therefore far from universal. Further, the quality of ICDS services is very low in most states. The Supreme Court orders on ICDS are essentially aimed at achieving “universalisation with quality” within a reasonable time frame.

### Supreme Court Orders

Here again the crucial order goes back to 28<sup>th</sup> November 2001, when the Supreme Court directed the government to “universalize” ICDS:

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<sup>52</sup> Seventh Report (March 2007) of the Commissioner appointed by the Supreme Court in the 'Right to Food' case. To read the full report please visit [www.righttofoodindia.org](http://www.righttofoodindia.org).

<sup>53</sup> It is estimated that population of children in the 0-6 years age group is about 14 crores. Source: Government of India (2007), “Sarva Baal Vikas Abhiyan”, draft, Ministry of Women and Child Development, page 1; based on 2006 Population Projections from Census data

“(i) We direct the State Govts. / Union Territories to implement the Integrated Child Development Scheme (ICDS) in full and to ensure that every ICDS disbursing centre in the country shall provide as under:

- (a) Each child up to 6 years of age to get 300 calories and 8-10 gms of protein;
- (b) Each adolescent girl to get 500 calories and 20-25 grams of protein;
- (c) Each pregnant woman and each nursing mother to get 500 calories & 20-25 grams of protein;
- (d) Each malnourished child to get 600 calories and 16-20 grams of protein;
- (e) Have a disbursement centre in every settlement.”

This order, however, received very little attention for several years. Virtually nothing was done to implement it. In April 2004, several marathon hearings on ICDS were held in the Supreme Court and detailed orders were issued, followed by further orders on 7 October 2004. This was followed by a landmark judgement regarding the ICDS scheme on 13 December 2006. However before, detailing the 13 December orders, we shall look at a few key directions of the 7 October 2004 order. The key orders in this series are as follows:

1. The Supreme Court directed the Government of India to increase the number of anganwadis from 6 lakh to 14 lakh habitations, and to “file within three months an affidavit stating the period within which it proposes to increase the number of anganwadi centers (AWCS) so as to cover the 14 lakh habitations.”

2. "All the State Governments/UTs shall allocate funds for the ICDS on the basis of one rupee per child per day, 100 beneficiaries per AWCS and 300 days feeding in a year, i.e. on the same basis on which the centre makes the allocation."\*
4. All SC/ST habitations should have an anganwadis "as early as possible". Until the SC/ST population is fully covered, all new anganwadis should be located in habitations with high SC/ST populations.
5. "All State/UTs shall make earnest effort to cover the slums under the ICDS."
6. ICDS services should never restricted to BPL families ("BPL shall not be used as an eligibility criteria for ICDS").
7. "Contractors shall not be used for supply of nutrition in Anganwadis and preferably ICDS funds shall be spent by making use of village communities, self-help groups and Mahila Mandals for buying of grains and preparation of meals."
8. ICDS funds provided by the Central Government under the Pradhan Mantri Gramodaya Yojana (PMGY) should be fully utilised by the State Governments. Further these funds supplement, and not substitute for, ICDS funds provided by the State Governments. *However the PMGY has been discontinued since 2005/06 and the programme has been closed.*
9. "The Central Government and States/UTs shall ensure that all amounts allocated are sanctioned in time so that there is no disruption whatsoever in the feeding of children."

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\* Note: This order effectively raises the budget norm for supplementary nutrition under ICDS to "two rupees per child per day". On 7<sup>th</sup> October 2004, when the above order was issued, the Supreme Court also stated that "the aspect of sanctioning 14 lakhs AWCS and increase of norm of rupee one to rupees 2 per child per day would be considered by this Court after two weeks". However, this follow-up discussion is yet to take place.

10. "All State Governments/UTs shall put on their websites full data for the ICDS schemes including where AWCS are operational, the number of beneficiaries category-wise, the funds allocated and used and other related matters."

11. The entitlements of children under six have been further strengthened in the Supreme Court judgement of 13 December 2006. This can be considered a landmark judgement because in general, the judiciary refrains from imposing a financial responsibility on the state. The directions contained in this order are seminal and are presented below.

"(1) Government of India shall sanction and operationalize a minimum of 14 lakh AWCs in a phased and even manner starting forthwith and ending December 2008. In doing so, the Central Government shall identify SC and ST hamlets/habitations for AWCs on a priority basis.

(2) Government of India shall ensure that population norms for opening of AWCs must not be revised upward under any circumstances. While maintaining the upper limit of one AWC per 1000 population, the minimum limit for opening of a new AWC is a population of 300 may be kept in view.

Further, rural communities and slum dwellers should be entitled to an "Anganwadi on demand" (not later than three months) from the date of demand in cases where a settlement has at least 40 children under six but no Anganwadi.

(3) The universalisation of the ICDS involves extending all ICDS services (Supplementary nutrition, growth monitoring, nutrition and health education, immunization, referral and pre-school education) to every child under the age of 6, all pregnant women and lactating mothers and all adolescent girls.

(4) The order also specifies the monetary allocation to be made per beneficiary under the ICDS scheme. The court instructs all State Governments and Union Territories to fully implement the ICDS scheme by, inter alia,

(i) allocating and spending at least Rs.2 per child per day for supplementary nutrition out of which the Central Government shall contribute Rs.1 per child per day.

(ii) allocating and spending at least Rs.2.70 for every severely malnourished child per day for supplementary nutrition out of which the Central Government shall contribute Rs.1.35 per child per day.

(iii) allocating and spending at least Rs.2.30 for every pregnant women, nursing mother/adolescent girl per day for supplementary nutrition out of which the Central Government shall contribute Rs.1.15.

(6) Chief Secretaries of all State Governments/UTs are directed to submit affidavits with details of all habitations with a majority of SC/ST households, the availability of AWCs in these habitations, and the plan of action for ensuring that all these habitations have functioning AWCs within two years.

(7) Chief Secretaries of all State Governments/UTs are directed to submit affidavits giving details of the steps that have been taken with regard to the order of this Court of October 7<sup>th</sup>, 2004 directing that "contractors shall not be used for supply of nutrition in Anganwadis and preferably ICDS funds shall be spent by making use of village communities, self-help groups and Mahila Mandals for buying of grains and preparation of meals". Chief Secretaries of all State Governments/UTs must indicate a time-frame within which the decentralisation of the supply of SNP through local community shall be done."

### **Comments**

The Supreme Court orders of April and October 2004 gave a useful wake-up call to the government, as far as the universalization of ICDS is concerned. The universalization of ICDS was included in the National Common Minimum Programme of the UPA Government in May 2004. The judiciary's continued focus on ICDS starting with the

December 2006 judgement promises to keep the issue alive till universalisation of ICDS is effected. The National Advisory Council submitted detailed recommendations for achieving “universalization with quality” in October 2004, and some “follow-up recommendations” in February 2005 (see [www.nac.nic.in](http://www.nac.nic.in)). The expenditure of the Central Government on ICDS was roughly doubled (from Rs 1,500 crores to Rs 3,000 crores) in the Union Budget 2005-6.

However, according to conservative estimates, the recent judgement (13 December 2006) necessitates a budgetary allowance of Rs 9000 crore per annum. In this light the 2007-08 Union Budget allocation of Rs 4,761 crores is minimalistic. This allocation has barely increased in real terms, and remains virtually unchanged as a proportion of GDP.

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As far as the situation on the ground is concerned, the issue of entitlements of children under six, as embodied by ICDS, has attracted the attention of civil society organisations. A Childrens Right to Food Convention, held in April 2006, helped build consensus on the issue of universalization with quality. Since the convention many activities have been held across the country to highlight the social importance of *anganwadis*; and the issue has also broken into the public consciousness.

## NATIONAL OLD AGE PENSION SCHEME

### **Background**

This scheme was launched in 1995 to provide “old age pensions” to senior citizens (aged 65 years or more). It is part of the National Social Assistance Programme, which also includes two other schemes: the National Family Benefit Scheme (NFBS) and Annapurna.<sup>54</sup>

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<sup>54</sup> The National Social Assistance Programme also included the National Maternity Benefit Scheme (NMBS) till it was transferred to the Ministry of Health and Family Welfare in 2001-02.

The National Old Age Pension Scheme (NOAPS) is primarily addressed to old men and women with no assured means of subsistence, but the eligibility conditions vary from state to state, and so does the coverage of the scheme. The pensions are given in cash, with the Central Government contributing Rs 75 per month, often supplemented with a contribution from the State Government (e.g. in Rajasthan the old age pension is Rs 200 per month). The Central Government enhanced its contribution to Rs. 200 per month, in March 2006. One of the main problem with this scheme is its small coverage: there are plenty of applications, but funds are limited to 50% of the BPL individuals above the age of 60. Even within this, the conditionality imposed by the scheme of the individual not being “supported” by other family members further restricts the outreach of the programme.

In 2002-3, NOAPS was “transferred” to the State Governments (along with other NSAP schemes): from a “Centrally Sponsored Scheme”, it became part of the State Plans. This is meant to be a relatively minor administrative reform, whereby the Central Government gives a cash grant to the State Government (under “Additional Central Assistance”) and lets it run the scheme, instead of co-implementing the scheme with the State Government. In practice, however, this “transfer” tends to have an adverse impact in several ways. First, the cash grants disbursed by the Central Government are often “diverted” by State Governments for other purposes, or released after long delays. Second, after a scheme is transferred to the State Plans, the Central Government stops monitoring it. Third, the transfer has also terminated the payment of administrative charges by the Central Government, and State Governments often fail to make up for this. Aside from NOAPS, other schemes under the National Social Assistance Programme (i.e. Annapurna and the National Family Benefit Scheme) have also been transferred to the State Plans.

### **Supreme Court Orders**

1. State governments have been directed to complete the identification of persons entitled to pensions under NOAPS, and to ensure that the pensions are paid regularly.<sup>55</sup>

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<sup>55</sup> Supreme Court Order dated 28<sup>th</sup> November, 2001.

2. Payment of pensions is to be made by the 7<sup>th</sup> day of each month.<sup>56</sup>

3. The scheme must not be discontinued or restricted without the permission of the Supreme Court.<sup>57</sup> This actually applies to all the schemes covered by the interim order of 28<sup>th</sup> November 2001 (see Section 2.1). However it is particularly relevant to schemes such as NOAPS, because these schemes are quite “fragile”: there are no strong lobbies to defend them, and they often come under the financial axe when State Governments face a financial crisis.

4. The NOAPS grants paid by the Central Government to the State Governments under “Additional Central Assistance” should not be diverted for any other purposes.<sup>58</sup>

**Comments:**

Even though the enhancement of the contribution of the Central Government for the pension amount was announced in the budget speech of the Finance Minister in March, 2006, the funds reached the state only by September. Many states therefore did not enhance the pensions for the financial year 2006-07. A recent announcement by the Prime Minister has enhanced the entitlement under this scheme to Rs.400 per beneficiary per month. More significantly, the cap on 50% of BPL has been removed and BPL persons who are 65 and above have been brought within the ambit of this scheme. It is hoped that this will go a long way in ensuring more secure entitlements to one of the most neglected and marginalized section within our society.

There are many implementation issues in the States of this programme. For instance, in many states, old people are forced to walk long distances to collect their pensions from the Block headquarters and often do not get it on time – with the pensions reaching once

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<sup>56</sup> Supreme Court Order dated 28<sup>th</sup> November, 2001.

<sup>57</sup> Supreme Court Order dated 27<sup>th</sup> April 2004.

<sup>58</sup> Supreme Court Order dated 18<sup>th</sup> November 2004.

in six months rather than monthly. There is a possibility of streamlining distribution of pensions through bank accounts, money orders or transfer through panchayats.

Even with all its flaws, this is the only programme which provides a chance for a dignified living to old people living below the poverty.

## **NATIONAL FAMILY BENEFIT SCHEME**

### **Background**

This scheme, like NOAPS, is part of the National Social Assistance Programme. It provides for lump-sum cash assistance of Rs 10,000 to BPL families on the death of a primary breadwinner, if he or she is aged between 18 and 65 years. A “primary breadwinner” is a household member whose earnings contribute substantially to household income. The amount of assistance is Rs 10,000 for accidental deaths and Rs 5,000 in the case of death due to natural causes. The payment is to be made to the “surviving head” of the household, after a local enquiry.

### **Supreme Court Orders**

1. As with other food-related schemes, the Supreme Court order of 28<sup>th</sup> November 2001 calls for prompt implementation of the National Family Benefit Scheme. BPL families are to be paid Rs 10,000 within four weeks through the local Sarpanch when the breadwinner dies.<sup>i</sup>

2. As with NOAPS, this scheme is not to be discontinued or restricted in any way without the permission of the Supreme Court.<sup>59</sup>

4. None of the benefits should be withdrawn from this scheme as a result of this order till further orders, by any of the State Governments or Union Territories.<sup>60</sup>

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<sup>59</sup> Supreme Court Order dated 27th April 2004.

<sup>60</sup> Supreme Court Order dated 18th November 2004.

## **Comment**

So far, the National Family Benefit Scheme has not received much attention in the Supreme Court hearings, interim orders. While information available from the field as well as the analysis of the macro-data on the utilization in this scheme, brought out by the Commissioners Office point out to glaring gaps in the way the scheme is functioning, the scheme has not received the attention it deserves from the Campaign groups.

## **ANNAPURNA**

### **Background**

The Annapurna Scheme was launched on 1<sup>st</sup> April 2000. The target group consists of “senior citizens” who are eligible for an old age pension under the National Old Age Pension Scheme (NOAPS), but are not actually receiving a pension. The beneficiaries, to be identified by the Gram Panchayat after giving wide publicity to the scheme, are entitled to 10 kgs of grain per month free of cost through the Public Distribution System (special ration cards are issued to them for this purpose). The intention appears to be to provide some sort of emergency food security to elderly persons who are waiting for a pension to be sanctioned to them under NOAPS. However, the coverage of Annapurna itself is very limited. In 2002-3 this scheme was “transferred” to the State Plans, like NOAPS.

### **Supreme Court Orders**

1. As with other food-related schemes, the Supreme Court order of 28<sup>th</sup> November 2001 calls for prompt implementation of Annapurna (“the States/Union Territories are

directed to identify the beneficiaries and distribute the grain latest by 1st January, 2002").<sup>61</sup>

2. As with NOAPS and NFBS, this scheme is not to be discontinued or restricted in any way without the permission of the Supreme Court.<sup>62</sup>

### **Comment**

The status of Annapurna is not very clear. Field reports suggest that the coverage is very limited. Also, there are occasional reports of the scheme being discontinued in particular states, in violation of Supreme Court orders. Ideally, those who are eligible for Annapurna should be promptly covered by the National Old Age Pension Scheme. As mentioned earlier, with the upward revision of the central assistance for the NAOPS, there is an urgent need to upwardly revise the entitlements under the Annapurna scheme as well.

## **NATIONAL MATERNITY BENEFIT SCHEME**

### **Background**

This scheme is a timid attempt to introduce "maternity benefits" in India's social security system. It was introduced in 1995 as part of the National Social Assistance Programme, and later transferred to the Health Ministry. Under NMBS, pregnant women from BPL families are entitled to lump-sum cash assistance of Rs 500, up to two live births. The payment is to be made 8-12 weeks before delivery, but in practice there are long delays, partly due to the complex application procedures. Women are often paid months if not years after delivery, and this defeats the purpose of the scheme. Further, the coverage of this scheme is very low: according to official figures, the number of women who actually received cash payments under NMBS in 2003-4 was as low as 4.3 lakhs - less than 2 per cent of the total number of births in that year.

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<sup>61</sup> Supreme Court Order dated 28th November 2001.

<sup>62</sup> Supreme Court Order dated 27th April 2004.

## Supreme Court Orders

1. As with other food-related schemes, the Supreme Court order of 28<sup>th</sup> November 2001 calls for prompt implementation of the National Maternity Benefit Scheme.
2. As with NOAPS, this scheme is not to be discontinued or restricted in any way without the permission of the Supreme Court.<sup>63</sup>
3. On 9<sup>th</sup> May 2005, the Supreme Court refused to allow the Government of India to phase out NMBS and provide maternity benefits under a new scheme, Janani Suraksha Yojana (JSY). The reason for this refusal is that it is not clear whether the new scheme preserves all the benefits available under NMBS, as the government claims. The Court requested the government to submit further information on JSY, and asked the Commissioners to “examine the matter in depth and file a report”. “Meanwhile, the existing National Maternity Benefit Scheme will continue.”<sup>64</sup>

## Comments

This scheme is in very bad shape. The procedures are complicated, the quantum of benefits is small, payments are often delayed for months if not years, and the coverage is very limited. The government has merged this with the Janani Suraksha Yojana (JSY), but JSY itself has many flaws. In fact, the main focus of JSY is not maternity entitlements but the promotion of institutional deliveries and safe motherhood. Also, it is not clear whether this new scheme preserves the earlier NMBS entitlements, in particular maternity benefits in cases of a delivery at home. Despite unambiguous instructions that Rs.500 needs to be paid, even in the case of home deliveries, this message does not seem to have been communicated adequately to the State Governments and there are multiple field reports from across the country about the non-implementation of this scheme.

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<sup>63</sup> Supreme Court Order dated 27<sup>th</sup> April 2004.

<sup>64</sup> Supreme Court Order dated 9<sup>th</sup> May, 2005.

## SAMPOORNA GRAMEEN ROZGAR YOJANA

### Background

The initial PUCL petition, submitted in April 2001, argued that assured employment at a living wage is the best protection against hunger. In this and other ways, the right to food is closely connected to the right to work. Employment issues have figured in the Supreme Court hearings from time to time.

Sampoorna Grameen Rozgar Yojana (SGRY) is a centrally-sponsored employment scheme. It was initiated in August 2001, and officially aimed at generating 100 crore person-days of employment each year. According to the official guidelines: "The SGRY is open to all rural poor who are in need of wage employment and desire to do manual and unskilled work in and around his/her village/habitat. The primary objective of the scheme is to provide additional wage employment in rural areas, thereby provide food security and nutritional levels. The secondary objective is the creation of durable community, social, economic assets and infrastructural development in rural areas. While providing employment preference shall be given to agricultural wage earners, non agricultural unskilled wage earners, marginal farmers, women, members of the Scheduled Castes/ Scheduled Tribes and parents of child labour withdrawn from hazardous occupations, parents of handicapped children or adult children of handicapped parents who want to work for wage employment."<sup>65</sup>

This scheme however is being gradually replaced by the NREGA. Unlike the SGRY, the NREGA provides for a right to a hundred days of employment and has in addition a compensatory mechanism in case employment is not provided. It is therefore a far more robust means of ensuring entitlement than the SGRY.

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<sup>65</sup> Government of India (2002), Guidelines for Sampoorna Grameen Rozgar Yojana (New Delhi: Ministry of Rural Development), page 1.

## Supreme Court Orders

Important orders pertaining to SGRY were issued by the Supreme Court on 28<sup>th</sup> November 2001, 8<sup>th</sup> May 2002, 2<sup>nd</sup> May 2003, and 20<sup>th</sup> April 2004. These include:

1. **Speedy implementation:** Several directions were issued (notably on 8<sup>th</sup> May 2002, 20<sup>th</sup> April 2004 and 17<sup>th</sup> October 2004) to the effect that SGRY should be implemented “expeditiously” by the Central Government and State Governments. In particular funds should be released on time and fully utilised, and SGRY funds should not be “diverted” for other purposes.<sup>66</sup>

2. **Priority groups:** “The respondents shall focus the SGRY programme towards agricultural wage earners, non agricultural unskilled wage earners, marginal farmers and, in particular, SC and ST persons whose wage income constitutes a reasonable proportion of their household income and to give priority to them in employment, and within this sector shall give priority to women.”<sup>67</sup>

3. **Doubling of SGRY:** On 2<sup>nd</sup> May 2003, the Court directed the government to “double” the scale of SGRY, in view of drought conditions prevailing in large parts of the country: “The present SGRY system should be expanded, at least doubled, both in terms of allocation of food-grain and cash for the months of May, June, and July”. On 20<sup>th</sup> April 2004, this direction was extended: “The directions for doubling the food grains as also cash in terms of the order dated 2<sup>nd</sup> May, 2003 shall be applicable this year also.”

4. **Timely wage payments:** Wage payments under SGRY are to be made on a weekly basis.<sup>68</sup>

5. **Ban on contractors:** The use of contractors is “prohibited”.<sup>69</sup>

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<sup>66</sup> Supreme Court Orders dated 8<sup>th</sup> May, 2002.

<sup>67</sup> Supreme Court Order dated 8<sup>th</sup> May 2002.

<sup>68</sup> Supreme Court Order dated 8 May 2002.

<sup>69</sup> Supreme Court Order dated 8 May 2002.

6. **Minimum wages:** “The State Governments/UTs are directed to pay minimum wages to the workers under the Scheme.”<sup>70</sup>

7. **Ban on labour-displacing machines:** The State Governments were also directed to “stop use of labour displacement machines” under SGRY.<sup>71</sup>

8. **Role of Gram Panchayats:** Gram Panchayats are entitled to “frame employment generation proposals in accordance with the SGRY guidelines for creation of useful community assets that have the potential for generating sustained and gainful employment”. Further, “these proposals shall be approved and sanctioned by the Gram Panchayats and the work started expeditiously”.<sup>72</sup>

9. **Social audits:** Gram Sabhas are entitled to conduct social audits of SGRY (and indeed of all food-related schemes). On receipt of any complaint of misuse of funds from the Gram Sabhas, the implementing authorities shall “investigate and take appropriate action in accordance with the law”.<sup>73</sup>

10. **Transparency:** “Access to all public documents including all muster rolls shall be allowed to such persons who seek such access and the cost of supplying documents shall not be more than the cost of providing copies of the documents.”<sup>74</sup>

## Comments

Field reports suggest that most of the above orders are routinely violated in most states. Some specific instances, such as the violation of Court orders on SGRY in Badwani District (Madhya Pradesh), have been taken up by the Commissioners or even referred to the Supreme Court through Interim Applications. But even there, attempts to seek redressal have been partially successful at best.

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<sup>70</sup> Supreme Court Order dated 20th April 2004.

<sup>71</sup> Supreme Court Order dated 20th April 2004.

<sup>72</sup> Supreme Court Order dated 8 May 2002.

<sup>73</sup> Supreme Court Order dated 8 May 2002.

<sup>74</sup> Supreme Court Order dated 20th April 2004.

The National Rural Employment Guarantee Scheme is set to replace the SGRY in all districts of the country.

#### **THE NATIONAL RURAL EMPLOYMENT GUARANTEE SCHEME**

The National Rural Employment Guarantee Act 2005 (NREGA) was unanimously passed by the Indian Parliament in August 2005. So far, the implementation of this Act has not come under the scrutiny of the Supreme Court, since the Act is yet to come into force. In particular, the Employment Guarantee Act is not mentioned in any of the Interim Orders. However, public works programmes are often mentioned, and the directions relating to these programmes (e.g. regarding prompt payment of wages) can be regarded as applicable to the NREGA also. Further, it is very likely that the implementation of the Employment Guarantee Act will figure quite soon in the Supreme Court hearings. Thus, employment guarantee is an integral part of the agenda of “legal action for the right to food”.

## Chapter 4

### Starvation: Definition, Verification and Response

#### *Objective 2 of the Food Rights Code:*

*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. The Code must define 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 2003<sup>75</sup>.

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<sup>75</sup> 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

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

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College), Neeraj Hatekar (Professor, Department of Economics, University of Mumbai), Sanjay Rode (Ph. D. student, Department of Economics, University of Mumbai), Abhay Shukla (Coordinator, SATHI Cell, CEHAT), Neelangi Nanal, Amita Pitre and Qudsiya (all researchers at CEHAT).

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 starving<sup>76</sup>.

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 adults<sup>77</sup>. 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

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<sup>76</sup> 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'.

<sup>77</sup> 'Guidelines for Investigating Suspected Starvation Deaths', by the Jan Swasthya Abhiyan) Hunger Watch Group (mimeo, 2003)

deemed mild to moderately malnourished, and below 60 per cent the situation is severe, below 50 per cent alarming.

*How is starvation defined for children? To add.*

### ***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 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 Orissa<sup>78</sup> 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 (NHRC)<sup>79</sup>, '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

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<sup>78</sup> 'Feedback from Dr. Amrita Rangaswamy on Starvation deaths', Tanushree Sood, CES, Mimeo, 2005.

<sup>79</sup> Personal communication

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

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 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.

### *Investigating the Causes of Death to Verify Starvation*

Even as measures to mitigate and address the deprivation and prevent further deprivation, destitution, under-nutrition and starvation are undertaken (and these will be outlined in the next section), it is important that the examination of whether the

deaths were of starvation also proceeds side by side. The Hunger Watch Group of the Jan Swasthya Abhiyan<sup>80</sup> suggests 4 parts to this investigation. These are as follows:

1. Assessing whether there is an abnormally high death rate in the villages: A cluster of such villages, from where there have been reports of suspected starvation deaths, may be taken up for investigation. All the deaths that have taken place in these villages during the period of serious food deficit (say a period of at least three months, may be six months or one year) would need to be documented. Details would be collected by visiting families of the deceased, the mortality records maintained by the ANM, and other local enquiries. In parallel, the exact population of all the villages and hamlets in the cluster would be ascertained from census and voter lists and local enquiries. We need to ascertain whether the number of deaths in this particular area is significantly higher or not. This is done by comparing (bearing in mind seasonal variations). To see whether the number of deaths in the area we are investigating are significantly higher than the previous year in the same area or than that of deaths in nearby villages in the same year, or in the same area in the same period in the previous year, or the average deaths for the district in that period.

The detailed methodology is given in annexure 2.

2. Anthropometry to assess nutritional status of the community: The second method is to use physiological measures of height and weight to assess the nutritional status of the community. One needs to take a representative sample of hamlets, villages, and within then of various age, gender, occupational and identity groups, and measure the BMI of adults, and the nutrition levels of children. Once again, the detailed methodology is given in Annexure 3.
3. Assessing malnutrition deaths among children: For children, the following criteria

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<sup>80</sup> 'Guidelines for Investigating Suspected Starvation Deaths', by the Jan Swasthya Abhiyan) Hunger Watch Group (mimeo, 2003)

may be used to establish malnutrition deaths:<sup>81</sup>

- Increased death rates among under-five children compared to state U5MR. An exercise must be done to calculate age specific death rates, and compare this with the state averages to define increased death rates.
- Siblings of children who have died of suspected malnutrition can be assessed. Their anthropometry may show very poor nutritional status and this would be supportive evidence.
- Access ICDS records and records from other sources for weight of the deceased child shortly before death if possible
- High mortality from minor infections (e.g. diarrhea, measles) is itself an indicator that the underlying cause of death is malnutrition. We need to compare mortality rates due to the infection in the sample community with 'standard' mortality rates for that illness. If say the case fatality rate for measles in a community is 20% compared to the known case fatality rate of 2% then the 'measles deaths' in the community are actually malnutrition deaths in which the terminal event is measles.

4. Verbal Autopsies: Verbal autopsies are individual investigations to reveal whether at least a few deaths in which starvation is suspected to be an underlying cause of death (irrespective of the immediate cause, which may often be infections etc.) Verbal autopsies should be used only in conjunction with the other methods outlined above, to document specific starvation deaths. It is reiterated that 'individual starvation deaths are only extreme examples of the severe nutritional deprivation being suffered by the entire community, and should always be presented in the larger context of community starvation'.

Verbal Autopsy is a scientific method of proven validity used for establishing the cause of death of individuals in a community, where forensic autopsies have not

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<sup>81</sup> 'Guidelines for Investigating Suspected Starvation Deaths', by the Jan Swasthya Abhiyan) Hunger Watch Group (mimeo, 2003)

been or cannot be conducted for any reason. These also less distress o the bereaved family than forensic autopsies. This method has been successfully employed in India, Bangladesh, Kenya, Nigeria, Philippines, Indonesia, Egypt, and several other countries to determine the cause of death of individuals in various circumstances, especially to identify causes of maternal and infant mortality. It should look into a sample of 'suspected starvation deaths', or any death where family members report that the deceased had significantly reduced food intake due to non-availability of food, during the month prior to death. The questionnaire to conduct a verbal autopsy is somewhat medicalised in nature, hence a person with some experience of health work may find it useful, but for transparency local field workers can and should be given appropriate training to administer it. It begins with the care giver or family member (or any one lese most familiar) explains what happened in their own words, details of food security, subsequent illnesses, and responses to treatment received till the death of the deceased. The statement is recorded verbatim, supplemented by questions in the attached questionnaire (Annexure 4). A special section is devoted to collecting information concerning family food security. Another section elicits the dietary history relating to the deceased, during the week and during the month prior to death. The filled questionnaire is then sent to a panel of three independent physicians along with available medical records of the deceased, who do not communicate with each other.

The detailed methodology and questionnaire is given in Annexure 4.

### ***State Interventions in Situations of Suspected Starvation:***

Even without awaiting the outcomes of the community investigations and verbal autopsies 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.

## Chapter 5

### Addressing Chronic Hunger

#### *Objective 3 of Food Rights Code*

*To identify individuals, dispossessed communities, classes and social categories of people who live with prolonged hunger, malnutrition and starvation, and to intervene with short, medium and long term measures to mitigate, prevent and sustainably reverse this situation of chronic hunger.*

Once again, Codes in the past did not address and often did not even admit to certain segments of the population who live with critical hunger and chronic food denials even in normal times. This links closely with the neglected phenomena of destitution. What usually goes unrecognised is that death by starvation is only the outcome of a much more chronic, invisible, malaise of destitution. There are large numbers of forgotten people who live at the edge of the survival. Each day comes afresh with the danger of one push that will hurtle them down the precipice. This may come from an external emergency, like a natural disaster, epidemic or riot, but even from local crises: a sickness in the family, a sudden untimely death of a bread earner, or a brush with the law. The problem of starvation and hunger can be overcome only when people who live on a regular basis in constant peril of slipping into starvation, or at least chronic, long term, unaddressed hunger - people who may be described as destitute are protected from destitution.

Government programmes are woefully inadequate to address destitution. Our evidence is that apart from major leakages and corruption, the coverage of these schemes is so meagre that they leave huge gaping holes in the social security net through which large numbers of most destitute women and men, girls and boys slip through measures to prevent and reverse starvations, or the persistence absolute hunger. It is stressed that this is a duty of the State not to the dead, but to the precariously living. It requires public vigilance about individuals, communities and several categories living with starvation and absolute hunger. It requires the State to act, not after there is an emergency like a drought or flood, not even *after* people die of starvation, but pro-actively before people

slip into destitution, and fail to access in an assured and reliable manner, with dignity, the nutritious and culturally appropriate food they require to lead healthy lives.

In a sense, this set of duties are of pro-active measures by the State to prevent hunger and starvation and to promote well being and the right to food of all people: to anticipate and forestall starvation, by recognising and arresting destitution well in time, before it pushes hapless people into starvation. The previous chapter on starvation was reactive, whereas this is actively protective and deterrent. The extent to which public authorities are able to implement the measures in this chapter, to that extent the interventions listed in the past chapter will become in fructuous, and an enormous amount of human suffering avoided.

This requires local authorities, mainly panchayats and local bodies, to identify those classes, social categories and local communities, who are destitute in normal times, who lack the resources, financial and material, the employment, assets, access to credit, and social and family support and networks, to secure sufficient and assured food for themselves and in many cases for their dependents. These are people who are frequently powerless and disenfranchised, socially isolated and devalued, sometimes stigmatised and even illegalised, and often with special needs born out of disability, illness, social standing and age.

Even in the more intimate context of a village, many of these socially excluded groups are invisible, barely known and acknowledged, therefore the panchayats will have to take special steps to identify them. In diverse cultural and socio-economic contexts, these may vary widely, such as certain denotified and nomadic tribes in one place, some specially disadvantaged dalit groups like Musahars or Madigas in another, weavers, artisans and particularly disadvantaged minority groups in yet another, all designated 'primitive tribal groups', and so on. In addition, studies have established that in all cultural contexts, the following rural social categories consistently tend to be very dispossessed and vulnerable in their access to food: disabled people, both as bread

winners and dependents, single women and the households that they head, aged people especially those who are left behind when their families migrate or who are not cared for by their grown children, people with stigmatised and debilitating ailments such as TB, HIV AIDS and leprosy, working and out of school children and bonded workers.

In the bridge between rural and urban destitute are the distress migrants, at the bottom of the heap both where they move for work, and from where they come. In urban contexts are street children, with or without responsible adult caregivers, urban homeless people, slum dwellers and a wide range of unorganised workers, both seasonal migrants and settlers, such as rickshaw pullers, porters, loaders, construction workers and small vendors, and people dependent on begging.

It is impossible for a Code like this to list all the measures that need to be taken for each of these groups. These would have to be locally evolved. But the extent to which these are instituted and implemented, and the extent to which destitution is effectively combated, hunger and starvation would be prevented. This Code will list a few illustrations:

- a. The Panchayat may consult with special assemblies of single women, disabled people, bonded workers, stigmatised communities and distress migrants, and identify all families among them with children which live with chronic hunger. It would ensure that all these children are enrolled in the nearest ICDS centre, and even before they slip into advanced stages of malnutrition, they are given as a preventive measure higher levels of nutrition which would have been given to them if they were identified to be in fourth grade malnutrition.
- b. The same assembly would also include old people, and they would be organised to demand work under NREGA. Special plantation works that require less hard labour would be opened specially for these groups, and care would be taken to include all

adults from these categories in these works, and also people from such occupations as weavers and artisans who cannot cope with conventional manual works.

- c. All households would be covered by AAY cards, and for all persons who are of the required age or social category such as widows and disabled people would be covered by pensions. The Panchayat would ensure systems of doorstep delivery of pensions in the first week of every month.
- d. All children who are out of school would be identified, and a residential bridge course organised in order to secure their bridge education as well as adequate nutrition. If parents such as single mothers and disabled people are unable to feed these children, and this is what pushes them into work, then the Collector would ensure their admission in the nearest government hostel.
- e. All seasonal distress migrants would be organised to demand work under NREGA, especially if it enables them to stay back from migration. But even if still choose to migrate, The Collector should establish camps, and vigilantly ensure that all are registered to get the protection offered by the Inter State Migrant Workers Act.
- f. All children and women would be eligible for all services in the ICDS, regardless of whether or not they are residents of that village. This would enable children and mothers of migrant families to access supplementary nutrition and immunisation.
- g. Old people should be permitted to eat at the school mid day meals, with no questions asked. This would act as the last defence against starvation for the destitute aged people of the village, at no additional cost except the cost of additional food.
- h. For children of migrant families and aged people left behind when they migrate, the local school should be converted into a community based hostel. The aged people would be the caretakers of the children, and both the aged people and the children would be entitled to all 3 meals. This would ensure dignified survival of old people, even while it enables children of the poorest distress migrant workers to continue their education, while also securing their nutrition.

An illustrative list of measure for urban areas is:

- a. For children on the street, both without parental support and those with parents who are also homeless, a series of community based residential schools should be created in existing government schools, in the nature of an additional shift after regular school hours. This is the only way that tens of thousands of such children in most cities, can be assured nutritious food, as well as protection and their right to education, at very little additional cost. The children can be bridged to eventually get admission in the same school.
- b. All homeless people should get AAY cards, and slum dwellers BPL cards. One reason why these are denied to them in many cities, is that ration cards are also treated as de facto identity cards. But this will not act a barrier to these most vulnerable urban residents from getting their right to food.
- c. People who live by begging should be carefully surveyed, but from a rehabilitative perspective. There are any among them who are aged, disabled with leprosy or polio, or single women. They should be given pensions which would enable them to give up begging.
- d. Areas which are widely populated by migrant workers, particularly single men who migrate without their families, should be mapped in the city. In these places, wholesome hygienically prepared food should be distributed with the help of trade unions and other organisations who work with unorganised workers, with some subsidy from the government. Religious and secular charitable organisations may be drawn in to contribute both with financial and management resources, and volunteers.

## Chapter 6

### Addressing Emergencies with Equity

#### *Objective 4 of Food Rights Code*

*To ensure that emergent situations that threaten mass access to food, such as natural and human made disasters are anticipated, mitigated and addressed with equity and speed, without consequences of mass food scarcities.*

We come finally to the more conventional and familiar content of the Food Code, and this is deals with emergencies. The problems and also the recommendations flow out of the first chapter which reviews past and existing Famine, Drought and Scarcity Codes. What is more, if the other objectives of the Code already recounted, namely securing right to food in normal times, addressing, mitigating and preventing starvation, and special support for destitute groups who live with chronic hunger even in normal times is executed, then many of the needs and crises of emergencies are already addressed. We will therefore only briefly recapitulate what should be the major principles and measures to deal with emergencies.

1. Declaration of Scarcity: The declaration of food scarcity must break away from the cumbersome, bureaucratic, opaque and long-drawn out provisions that still can be fund in most Codes even today, which result in such delays that the suffering, hunger, distress migration, distress sale of cattle and other assets, and indebtedness have long set in before the State takes any ameliorative measures. It needs also to recognise emergencies that may not be linked to less rainfall.

The District Panchayat and District Collector should be authorised to identify a range of emergent situations that may result in mass food scarcity. This could include low or ill-timed rainfall for crops and farmers who are dependent on rainfall and workers whom they may employ; sharp slump in prices of agricultural produce; worrying fall in the water

table; failures in such non-timber forest produce on which local communities depend substantially for food or livelihoods; flowering of bamboo; war, riots and ethnic clashes; the sudden closure of a major industry that employs a large number of workers; and floods, cyclones and earthquakes.

They should send their report with reasons to the state government. This should be examined by a small inter-ministerial group which also includes also the leader of the opposition, and they should be required to give their decision within 2 weeks of receipt. They should give reasons for their decision, and in case there are disagreements, there should be provision for an appeal to the State Human Rights Commission, whose decision would be final.

2. Public works: After the commencement of NREGA, public works need to be converged with NREGA, rather than creating a separate machinery and set of rules for relief works. However, after the declaration of scarcity in an area, the District Panchayat should be authorised to raise wages by up to 20 per cent of the minimum wage. Likewise, the limit of 100 days and employment of only one adult per family should be fully waived for the period of the scarcity. There should be a certain proportions of works selected which require less demanding manual labour, and this should be available to old, disabled and infirm people, as well artisans and weavers. But there should be a strictly enforced ban on children working in any of the sites.
3. Gratuitous Relief: Likewise, the provisions for gratuitous relief should also be converged as far as possible with existing schemes. The Panchayats at all levels will take special care to ensure that all eligible aged and disabled people, and members of specially vulnerable communities like the designated 'Primitive Tribal Groups' are fully

covered by AAY cards, and those who are eligible for pensions also receive this. The administration of ration shops and pension distribution should also be streamlined. The entitlement under each of these (subsidised rations and pensions) should also be raised by 50 per cent during the period of scarcity.

Likewise emergency feeding should be converged with the ICDS and mid day meals. ICDS food entitlements should be doubled during the period of the scarcity, and hot meals for children in the age group 3 to 6 years provided twice a day instead of once. The timings of the hot meals should be adjusted in ways that expectant and nursing mothers are able to eat at least one of the hot meals, of not both. Old and disabled people, and out of school children, should be encouraged to join the mod day meals, which should continue during the vacations.

## *Annexure 1*

### *Assessment of Death Rates*<sup>82</sup>

*An important component of investigating suspected starvation deaths is the calculation of death rates, in a specific area and pertaining to a specified period during which suspected starvation deaths have been reported.*

**Identifying the area for investigation** - Anecdotal reports may be received about unusually high number of deaths from certain villages. A cluster of such villages, from where there have been reports of suspected starvation deaths, may be taken up for investigation. All the deaths that have taken place in these villages during the period of serious food deficit (say a period of at least three months, may be six months or one year) would need to be documented.

Once the villages and the period have been finalised, all the deaths during the period should be recorded by means of small group enquiries throughout the area (covering all hamlets and house clusters)/ house to house survey in that area to document deaths in that particular period of time. The families of all the deceased would need to be visited, the date / month of death should be verified for all deaths being investigated. Deaths whose timing falls outside the study period should be excluded from the calculation.

To confirm the timing of all deaths, and in order not to miss any deaths, an attempt should be made to compare this data with the mortality records maintained by the ANM for the area. Our experience is that the ANM may be better at recording neonatal and infant deaths, since she does antenatal registration, but she may not record certain deaths esp. of adults in remote hamlets, which she visits infrequently.

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<sup>82</sup> 'Guidelines for Investigating Suspected Starvation Deaths', by the Jan Swasthya Abhiyan) Hunger Watch Group (mimeo, 2003)

Local calendar, local festivals, phases of the moon and local market days may be used to ascertain the date of death in case of all deaths in the specified period. The exact number of deaths in this period should be used for the calculation of death rates. The shorter the recall period, greater will be the accuracy in assessing the date of deaths.

A parallel important exercise is to assess the exact population of all the villages / hamlets in the cluster, which would form the denominator. The Gram Panchayat would usually have figures and voter lists, yet this may be cross-checked by actual estimation of number of households based on information from local people.

### **How to check whether the number of deaths in this particular area are significantly higher or not?**

There are two major issues involved if we calculate the death rates for a comparatively shorter period (e.g. three months) and in a small sample, and then extrapolate it to the whole year and compare it with the state figures. Firstly, there is seasonal variation in deaths. For e.g. there may be more deaths in rainy season due to water born diseases like diarrhoea. If the death rate we have calculated in our study coincides with the period in which there are seasonally higher deaths in that region, and then we extrapolate to the whole year, then definitely the death rate that we have calculated will be an overestimate compared to the annual death rate. Thus it is essential to consider the seasonal variation in deaths while calculating death rates for a shorter period. One way of doing this is to compare death rate in a specific season *this year* with the death rate during *the same season last year*. A higher rate this year indicates a definite and significant increase.

A second important issue related to calculating death rates in this manner is that if the sample population we have covered is too small in size, and then if we compare it with the rates of the state, it will may give an inaccurate estimate of death rates for that sample population being higher than the total state. For that we need to take certain minimum population while calculating death rates (*to be estimated*), and perform a statistical *comparison of proportions*, which will take into account the difference in sample

size.

To see whether the number of deaths in the area we are investigating are significantly higher than the previous year in the same area or than that of the nearby villages in the same year, we will have to follow certain steps:

- 1 Document all the deaths in the area we are investigating in the specified period of time in which we are suspecting that the starvation deaths have occurred.
- 2 Find out the number of deaths in the same area in the same period in the previous year through Gram Panchayat data.
- 3 The data for deaths in that District in the same period can be collected from the NSS records.
- 4 Find out the number of deaths for the district in that period.

To overcome the problem of seasonal variation in deaths, here we are comparing the deaths in the same period during last year in the same population. To calculate whether the deaths in the area we are investigating are significantly higher, we can apply the comparison of proportions test or chi-square test. For comparison, age specific deaths should be compared.

*For e.g. total number of deaths in the age group of 0 to 5 years in the village we are investigating are 17 in the year of investigation and the total number of children in this age group is 138. In the previous year in the same village the total number of children in the same age group were 154 and the total deaths that took place were 13. Then to find out whether the number of deaths is significantly higher or not, apply the proportion test.*

## *Annexure 2*

### *Anthropometry to assess nutritional status of the community*<sup>83</sup>

An effective nutritional survey involves an assessment of nutritional status of children and adults in the area based on anthropometric measurements, assessment of specific deficiencies, socio-economic status, along with current sources of income, availability of food and social security measures such as Fair price shop, Ration shop and Anganwadis etc. The following strategies could help in an accurate estimation of nutritional status based on anthropometric measurements. The other parameters could be tackled with the help of a short questionnaire answered by people in a village meeting.

At the outset explain what you are going to do to the activists who are helping you. Repeat this when you go to the actual villages. Explain the procedure patiently to each person involved in the study. Take their oral consent after informing them about the nature of the study, what is the objective behind it and where will the results be used. Assure them that the names of all participants will be strictly confidential in case they are alarmed about this. Lastly tell them that they can withdraw from the study at any stage.

**Sampling-** It is the method of choosing a part of the study population, rather than the entire population, for participation in the study. It should be representative of all the strata in the population. Sampling makes the study easier, economical and enables us to study a larger area.

Various methods can be employed for this according to our needs. In case of the present study we can study two or three hamlets in the area, which will give us a good idea of the nutritional status in the whole area.

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<sup>83</sup> 'Guidelines for Investigating Suspected Starvation Deaths', by the Jan Swasthya Abhiyan) Hunger Watch Group (mimeo, 2003)

**In order to take a representation from all the groups in the population we can select hamlets such that:** ♦ Hamlets close to the road and away from road are covered. ♦ Hamlets of different tribes, and or backward castes/ classes/ areas we are interested in working with are covered ♦ Hamlets with and without an Anganwadi facility are covered.

We can choose 2-3 hamlets, which cover these aspects. This would be a representative sample of the people we would like to work with. Within the hamlet we need not choose a further sub-sample if the hamlet is as small as of 30-40 households. In case it is as large as that of 100-200 households, we can take a 50% sample, i.e. we can choose every alternate house. This will give us a good representation of that hamlet. We can study the children in the age group of 1-5 yrs and adults above the age of 18 years in the chosen households. This sampling scheme will be repeated in each area we want to study.

**Nutritional survey of children-** The weight of a child is a sensitive indicator of its nutritional status. NCHS standards for ideal body weights for children, both male and female are available to us. (*Annexure I*) 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 IAP standards (Indian Academy of Paediatrics) are most commonly used as they are also the standards used by the ICDS (Integrated Child Development Scheme). In order to use this classification the weight of the child in Kilograms (Kg) and the age of the child in months should be available. It is also desirable to measure the height of the child to know the Height for age and whether there is 'stunting' which shows chronic/ long term undernutrition.

Tools required-

- 1 Weighing scale
- 2 Height measuring tape
- 3 Indian / local Calendar to ascertain the exact date of birth.

Weighing children above the age of 2 years is not a problem as they can stand on

the weighing scale. To weigh children between the ages of 12 months to 24 months, ask any responsible adult to hold the child in her arms. Weigh them both together. Then weigh the adult alone and calculate the difference between the two weights.

Precautions to be taken while measuring weight:

- (a) The zero error of the weighing scale should be checked before taking the weight and corrected as and when required.
- (b) The individual should wear minimum clothing, and be without shoes.
- (c) The individual should not lean against or hold anything, while the weight is recorded.

For accurate measurement of height, ask the person to stand against a straight wall. The position should be as such that both the feet are together, heels to wall and chin parallel to ground looking straight ahead.

As record of vital statistics is very poor in rural India, many times there is no reliable record of the child's age. Hence make sure that you are acquainted with the local festivals or landmark events, and take an Indian Calendar while recording the date of birth of the child. Make as accurate an estimation in months of the child's age. This is important for the following calculation.

The weight of the child should be compared to the ideal weight for that age mentioned in the NCHS standards. Calculate what percentage of the NCHS standard is the child's weight, using the formula-

$$\text{Percentage of the NCHS standards} = \frac{\text{Weight of the child} \times 100}{\text{Expected weight for that age (NCHS std)}}$$

#### IAP classification of Nutritional Status

Grade of Nutrition	Weight as Percentage of NCHS weight stds
Normal	> 80%

<b>Mild to moderate undernutrition I II</b>	71-80% 61-71%
<b>Severe undernutrition III IV</b>	51-60% 50% <

Tabulate the number of children falling in each category of nutrition status.

**Nutritional Status of Adults-**This is assessed based on the Body Mass Index or the BMI. BMI is the ratio of the weight of the adult in Kgs to the square of her/his height in meters.

$$\text{BMI} = \frac{\text{Weight in Kgs}}{\text{Height in meters}^2}$$

This is a very good indicator of adult nutritional status as it is age independent. It measures the person's weight for her height. Values of BMI between 20 to 25 are normal.

Undernutrition is measured using the following parameters.

#### **Nutritional Status using BMI**

<b>BMI analysis</b>	<b>Grade of undernutrition</b>
1. BMI <16	III degree CED*
2. BMI 16-17	II degree CED
3. BMI 17-18.5	I degree CED
20 4. BMI 18.5 to	Low normal
5. BMI 20 to 25	Normal
6. BMI >25	Overweight

\*CED - Chronic Energy Deficiency

**Criteria to define starvation in Adults** - An important issue is that malnutrition, starvation and starvation deaths seem to lie along a continuum. How is it possible to demarcate one from the other? A significant research finding is that in adults, below BMI of 19, mortality rates start rising. *Mortality rates among adults with BMI below 16 are nearly triple compared to rates for normal adults.*

Thus in adults a B.M.I of 16 and less should be used as a cut off point to demarcate starvation from undernutrition. 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.*

### *Annexure 3*

#### *Verbal Autopsy procedure<sup>84</sup>*

Verbal Autopsy is a scientific method of proven validity used for establishing the cause of death of individuals in a community, where forensic autopsies have not been or cannot be conducted for any reason. This is particularly useful in situations where the proportion of deaths occurring under medical care are low and where no autopsies are routinely carried out. This method has been successfully employed in India, Bangladesh, Kenya, Nigeria, Philippines, Indonesia, Egypt, and several other countries to determine the cause of death of individuals in various circumstances, especially to identify causes of maternal and infant mortality. At the Bhopal Peoples' Health and Documentation Clinic run by the Sambhavna Trust, Verbal Autopsy (VA) was used as a method for monitoring mortality related to the December 1984 Union Carbide disaster in Bhopal.

**Sampling-**Ideally, all the recent deaths in the area should be considered for VA, so there is no sampling involved. All deaths during a specified period (from one to three months) should be taken. Recall of details becomes poorer with respect to deaths prior to 3 months before the time of VA, and should be avoided.

A less demanding method is to conduct VA only on *suspected starvation deaths* during a specified recent period. However, here a working definition of 'suspected starvation deaths' needs to be used, for example 'any death where family members report that the deceased had significantly reduced food intake due to non-availability of food, during the month prior to death'. This option would thus involve a two-stage survey process, first identification of suspected starvation deaths and then VA on the selected suspected starvation deaths.

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<sup>84</sup> 'Guidelines for Investigating Suspected Starvation Deaths', by the Jan Swasthya Abhiyan) Hunger Watch Group (mimeo, 2003)

**Technique of Verbal Autopsy**-This method is based on the assumption that most causes of death have distinct symptom complexes and these features can be recognized, remembered and reported by lay people. It involves trained workers administering a questionnaire to the carer / close family member of the deceased. Information thus collected on the symptoms suffered and signs observed is given individually and independently to a panel of experts for ascertaining the probable cause of death.

### Steps in carrying out the Verbal autopsy

- ◆ **Training**-The questionnaire to conduct a VA is somewhat medicalised in nature and hence we recommend that a person with some experience of health work be given appropriate training in administering it, familiarity of the local language would be necessary. However given the circumstances in which it has been successfully used earlier, a well-trained fieldworker with good knowledge of the local language can also be suited for the job. The section wise details of the questionnaire will be provided later. All fieldworkers have to be given the background for conducting this VA, and be trained in interviewing skills, administration of the questionnaire and signs and symptoms of diseases.
  
- ◆ **Identification of households**- The fieldworkers would conduct a survey to identify and list households where deaths have taken place during the specified time period. Then for the VA, they would question carer of the deceased on the medical history and clinical symptoms suffered. It is best to identify a single carer who has been with the deceased and nursed her/him through the illness, and get all the information through this person. In case of children, the mother is the best person, though this would depend entirely on the circumstances. Using culturally appropriate language, the fieldworkers, should apply stringent criteria in the collection and recording of information. Information would be recorded on a questionnaire designed to elicit details of the last illness, bodily appearance at the time of death, details of food availability in the house, medical examinations and their results, treatment including duration etc.

**The VA questionnaire**-At the outset, the interviewer must explain to the carer, the

purpose of conducting the VA, and take an informed consent to proceed. This may be written or oral in case of non-literate carer, but this should be explicitly recorded. The verbal autopsy questionnaire (VAQ) begins with general, introductory questions to determine the lifecycle of the deceased. An instruction sheet is used by the field workers as a guideline for administration of the questionnaire. The instruction sheet should be translated into the local language where it is to be administered. The health workers would also confirm which medical records of the deceased are in the possession of the carer. General questioning familiarizes the carer with the type of information to be collected and enables the interviewer to create favorable conditions for the carer to speak openly, regarding personal and often traumatic details concerning the deceased.

The health worker then begins an open section in which the interviewee is invited to explain what happened in their own words, details of food security, subsequent illness/es, and responses to treatment received till the death of the deceased. The statement is recorded verbatim. With the use of filter questions, specific recordings of the symptoms related to different body systems are then made. While the interviewer should be cautioned against asking leading questions, the questionnaire consists of all important symptoms and signs relating to the major body systems, which should not be left out in case their importance is not realized by the carer. Thus the health worker identifies a body system, e.g. the respiratory system and encourages the carer to provide voluntary information on any particular symptoms, e.g. breathlessness, cough, expectoration tightness in chest etc. Care is taken to ensure that the interviewer does not provide any direct or indirect suggestions during questioning. Information on medical treatment received and documents related are also gathered.

A special section is devoted to collecting information concerning family food security. Another section elicits the dietary history relating to the deceased, during the week and during the month prior to death.

**Assessment of Completed Verbal Autopsy Questionnaires-** The filled VAQ is then sent to a panel of three independent physicians along with available medical records of the deceased. The physicians in the verbal autopsy assessment panel (who do not

communicate with each other about their opinions) fill in a VA analysis table for their convenience, and then write their opinions on the probable immediate, underlying and contributory causes of death of the individual.

The final opinion is arrived at on the basis of the level of agreement among the three independent medical opinions. In case all the three doctors in the assessment panel opine that the underlying cause of death has been 'Starvation', then the final opinion states that the 'most probable' cause of death is attributable to 'Starvation'. The final opinion states 'probable' in case two of the three doctors agree on the nexus between starvation and subsequent death and 'possible' if only one of the doctors in the panel mentions starvation as a probable cause of death. In case all three doctors opine that the disease or condition of death is not related to 'Starvation', the final opinion states that the cause of death is unrelated to 'Starvation'.

#### **Validity of the method of Verbal Autopsy in ascertaining cause of death -**

Through numerous studies carried out in different parts of the world, the method of Verbal Autopsy has been found to have a positive predictive value in the range of 70% to 80% depending on the cause of death and age of the deceased. This range of validity has been confirmed through comparison of opinions on cause of death as ascertained through usual autopsies (post-mortem examinations) and that through Verbal Autopsy.

**Appropriateness of VA in ascertaining starvation as a cause of death-**The areas where Verbal Autopsy is going to be used to assess starvation as a cause of death are also the areas where availability of medical care is poor. This includes reasons related to extreme poverty and physical lack of access to any government or private medical facility. Also, an overwhelming majority of these deaths occur in people's homes resulting in autopsies rarely being conducted and often there being no competent doctor to certify the cause of death. Although some care may have been available, medical records of the deceased prior to death are often unavailable or where available, these are often incomplete. Given such a situation, VA appears to be the most appropriate method

to assess the cause of death.

*The VA has to be supplemented in these circumstances by a thorough recording of the conditions of 'Food Security' prevailing in the community in general, including natural disasters of drought, famines, rain and crop failure or conditions of gross/sudden unemployment, indebtedness etc, similar conditions in the individual household, any signs of desperation to find food such as borrowing, begging, stealing, consumption of unusual foods and incidents of suicide etc. Also an analysis of the 'Calorific value' of whatever food is available and eaten should be undertaken, to see whether the deceased was getting enough calories through food. To further strengthen the findings anthropometric measurements of the living siblings in case of children and the Body Mass Index of the living adults in the same household should be obtained.*

### **Dietary Survey and Calorific Value of Locally Eaten Foods**

Dietary survey is an essential part of the verbal autopsy process, which gives idea about whether starvation / insufficient food intake is a cause of death or not.

Whenever a dietary survey is carried out in any community to investigate starvation deaths, we first identify major local staple foods (basically cereals) eaten in that community. Then we give a fixed amount (say 1 kg.) of flour or grains of that cereal in any two houses of that community. We ask them to prepare their usual preparations out of the raw material given. We then calculate the amount of flour used to make one roti or amount of pulse used to prepare one Katori of dal. Then prepare a master chart indicating nutritive value of locally available foods. For eg. In Badwani district of Madhya Pradesh where verbal autopsies were conducted, one kilogram of maize flour was given to two families each and they were asked to prepare roti. Out of one kg. flour, six roties were made which means each roti contains approximately 170 gms. of flour. Since 100 gms of maize gives 342 calories, it was concluded that one roti in this area gives 580 Kcal approximately.

In case of calculating calorie intake of the deceased, information should be elicited regarding the food eaten by the deceased one week and one month prior to death. Note the number of meals eaten by him /her in a day. List the food items and their ingredients in details. In case of children, note the history of food intake up to three

months prior to death. With the help of the master chart of calorific value of locally available foods, then calculate the total calorie intake of the deceased per day prior to death.

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*

It may be noted here that the intake during the week prior to death may be reduced due to the illness itself, and is less significant to identify starvation compared to the intake one month prior to death. The data on intake has to be combined with data on Food availability for the family to come to a conclusion *about lack of food intake due to non-availability of food, in other words, starvation.*

History of consumption of unusual or 'famine' foods like toxic roots, leaves, tubers etc. or consumption of substances eaten to suppress hunger should also be noted. It indicates the non availability of other edible food items like pulses, grains etc.

### **Confirming the date of death**

To determine the exact date of death, local events calendar should be used. A local events calendar shows all the dates on which important events took place during a past one year period. It shows the different seasons, months, phases of moon, local festivals and events in the agricultural cycle.

It is important to accurately determine the date of each death also in the context of calculation of death rates (section III).

### **Mode and Causes of Death**

*Even medical professionals are often not very clear about the difference between mode of death and cause of death, and types of causes of death. Hence the need for us to be clear about these terms*

*when we talk of starvation as a cause of death.*

The Death Certificate issued by a doctor should contain the following-

**Cause of death:** A disease or injury that results in the death of the individual. If there is a time delay between the onset of the disease or injury and the time of death, then the cause can be divided into the following categories:

(a) **Immediate cause of death:** This is the disease or injury that developed just before the death and resulted in the death. E.g. Pneumonia, Diarrhoea, Ischaemic Heart Disease, Burns, Accident.

(b) **Underlying cause of death:** When there is a delay between the onset of the disease or injury and the ultimate death, this is the process that started the chain of events that eventually resulted in the death. E.g. Measles could be the underlying cause of Pneumonia which resulted in death of the individual, Atheromatous or narrowed blood vessels could be the underlying cause of Ischaemic Heart Disease. In the same way, severe malnutrition or starvation could be the underlying cause of death in a case where the immediate cause is diarrhea.

(c) **Contributory cause of death** is inherently one not related to the principal cause, but it must be shown that it contributed substantially or materially; that it aided or lent assistance to the production of death. It must be shown that there was a causal connection.

E.g. Undernutrition in death due Pneumonia, High blood pressure in Ischaemic Heart Disease.

*To illustrate the difference, take the case of a woman who is severely anemic during pregnancy. Her severe anemia remains untreated, and immediately after delivery she has moderate amount of bleeding and dies. (A healthy, non-anemic woman with similar amount of bleeding may have survived.) In this case, immediate cause of death is post-delivery bleeding, while underlying cause is severe anemia.*

**Mode of death:** A pathophysiologic derangement that is incompatible with life. It is a common final pathway to death for a number of disease processes. Modes of dying include organ failure (e.g. 'heart failure', 'renal failure', multi-organ failure'), cardiac or respiratory arrest, coma, cachexia, debility, uraemia and shock.

Therefore it is important to recognize that 'Cardio-respiratory arrest', which is often erroneously mentioned as the immediate cause of death *is in fact the mode of death in a person*. To state 'cardio-respiratory arrest' as a *cause* of death is not only factually erroneous, it may also be a deliberate subterfuge by a medical official, to avoid commenting on the actual cause of death, such as starvation.

As a general rule, a number of pathways can be responsible for a mechanism or mode of death, but causes of death are specific. For example, shock has a number of causes and therefore is a mode of death. However the post-partum sepsis that resulted in shock is the cause of death.

Another way of looking at it is, if all dead people have the entity that you would like to list as a cause of death, then it is likely to be a mode of death. All dead people suffer from low blood pressure (shock), cardiac arrest and pulmonary arrest.

**Starvation and Undernutrition as a cause of death**-It is obvious that Starvation and Undernutrition would generally occur as the underlying or contributory cause of death in an individual. The final clinical event before death may be a minor infection such as diarrhea or measles, which may become the immediate cause of death.

As we are going to deal with actual human beings in real life situations, the individuals would suffer from gradual reduction in the calorie intake while having to keep up desperate efforts to find work and food for the family. The children would have to cope with demands for their growth. Rather than an absolute deprivation of food leading directly to death, we would have a chain of events where starvation (<850 Kcal daily intake) is the underlying cause, and an infection becomes the immediate cause of

death.

### **Ethical issues related to conducting VA**

*There are certain serious ethical issues, which come up during the process of conducting a verbal autopsy in such a social situation. Some of the issues encountered and how they may be addressed are outlined below-*

#### **(a) Distress to relatives caused by the verbal autopsy procedure**

The verbal autopsy process involves a detailed questioning of the relatives about the illness, food intake, treatment and various other aspects of the deceased prior to death. This is a process, which is liable to cause distress among the relatives of the deceased when they are questioned.

To deal with this issue, an attempt should be made to carefully explain the purpose of the study to the relatives. Also, the option of not participating in the study should be kept open for the respondents. In some situations, where the respondents are not in a mental frame to answer the questions, a second visit may be made to conduct the questioning at a later stage, or the asking of information may be spread over two visits. Of course, the interviewer must properly introduce himself / herself, state the purpose of his / her visit, and thank the respondents for their co-operation etc.

#### **(b) Possible raising of false expectations among respondents**

Measuring of nutritional status of children and adults and detailed questioning of relatives of the deceased might lead to generation of expectation of some immediate benefit to be given by the interviewers to the respondents. This is especially likely if the interviewer is a person from outside the area, of apparently better socio-economic background etc.

This problem may be partly avoided if the basis of contact is by means of a local organisation or person who is already known to the people. If possible, the verbal autopsy should be done by a person who is known to the community or linked with a local organisation. People may be already aware of the method of working of the local organisation and would not expect any personal preferential 'dole' from a person who is

linked to the organisation. Rather it should be made clear that the findings of the survey would be used to generate pressure for better implementation of relief measures in the area, which would benefit everyone, provided that such an attempt is planned.

**(c) Need to share the results of the study with the people in their language**

Such a study should preferably be conducted on the demand of a local organisation, and should help to strengthen their demand for relief facilities. In the same spirit, the results of the survey should be communicated to the people in their own language, in village meetings and also by means of a simply written note in the local language.

*Method of preparing the final report and drawing the 'Hunger Pyramid'*

The methodology of investigation as described in previous chapters has been devised to ensure a thorough, factual and relatively objective investigation of a death as well as its context.

However, the report is not a mere collation of the facts thus collected. The report is a statement of our opinion on the basis of the facts collected along with corroborative arguments and evidence. It is, therefore, an analytical document carefully arguing a case once our investigation is complete and has led us to an opinion.

If the investigation convinces us that the death concerned is not a starvation death we must make our report accordingly if asked to do so by any agency. However, henceforth, this chapter assumes that we are making the report of what we consider to be starvation death(s), either of children or adults, in the setting of a starving community.

The objectives of the report are twofold:

- 1 To verify and certify **starvation death(s)**
- 2 To clearly detail the prevailing **community conditions** of malnutrition and starvation leading to morbidity (sickness) and further mortality (death) if action is not immediately taken.

Such a report can be used for demanding immediate action such as compensation and appropriate state action to ensure food security for the entire community, as well as build evidence and pressure for long term policy changes.

The report should have the following sections, at least -

- 1 Introduction
- 2 Under five mortality rates of the given community and comparison with state under-five mortality rates
- 3 Death rates within the community and comparison with state crude death rates
- 4 Estimation of malnourished children based on weight for age
- 5 Estimation of severely malnourished adults based on BMI
- 6 Details of starvation / malnutrition deaths among children
- 7 Details of starvation deaths among adults
- 8 Community situation of food security
- 9 Hunger pyramid for the community and overall assessment
- 10 Recommendations

## **1. Introduction**

This section should outline the initial information (press reports, personal communication), which originally led the team to investigate starvation deaths in this particular community. It should also contain some information about the area (district, taluka, villages), organisations and individuals involved in the investigation, and overall setting of food insecurity in the state / region (drought, failure of food security schemes etc.)

- 1 **Under five mortality rates of the given community and comparison with state under-five mortality rates**

## 2 **Death rates within the community and comparison with state crude death rates**

These death rates should be calculated and compared with the relevant state mortality rates. Then the number of excess deaths (actual deaths minus deaths expected according to state mortality rates) can be calculated. *All excess deaths taking place in a situation of serious food insecurity may be regarded as malnutrition deaths unless proved otherwise.* Here the absence of any major disasters or accidents may be quoted to rule out other causes of excess deaths.

### **4. Estimation of malnourished children based on weight for age**

All children with weight for height less than  $-3SD$  should be enumerated and listed individually also. The number should be expressed as a percentage of all children and compared with the state/block average as per ICDS records / NFHS II records, whichever available. ICDS records are preferable. Increase should be shown as percentage increase and it has to be argued that **according to the WHO any child with  $-3SD$  or less weight for age is considered in need of emergency treatment.**

It has been documented that **mortality rates among children increase several fold and drastically when the weight for age is below 60% of the expected weight.** Hence these children are at very high risk of mortality. Any increase in numbers of such children indicates that the entire community of children is at risk. Therefore, emergency measures must apply to all children in that particular community.

*According to the WHO criteria, if more than 30% of children in a community have low weight-for-age, it is a very high prevalence level. Although practically all poor rural communities in India have higher than this level of malnutrition, this too may be cited as evidence of very high level of malnutrition.*

<b>Prevalence group</b>	<b>% of children with low weight-for-age (below -2 SD scores)</b>
Low	<10
Medium	10-19
High	20-29
Very High	≥30

*(Criteria laid down in the WHO expert committee report on Anthropometry - WHO TRS 854, 1995)*

For effective advocacy, the weights of the children in the affected area should be compared with those of middle class children in the same age group. This would bring out the differences more sharply than do figures of percentages in the various categories of undernutrition.

#### **5. Estimation of severely malnourished adults based on BMI**

The number and percentage of adults with BMI less than 18.5 and BMI less than 16 should be computed and presented. Adults with BMI less than 16 are at high risk of mortality from starvation. If over 40% of adults in the community have a BMI of < 18.5, the community may be termed at 'critical risk for mortality from starvation' or a starving community.

<b>Low prevalence</b>	5-9% population with BMI< 18.5
<b>Medium prevalence</b>	10-19% population with BMI< 18.5
<b>High prevalence (serious situation)</b>	20-39% population with BMI< 18.5
<b>Very high prevalence (critical situation)</b>	≥ 40% population with BMI< 18.5

*(Criteria laid down in the WHO expert committee report on Anthropometry - WHO TRS 854, 1995)*

#### **6. Details of starvation / malnutrition deaths among**

## **children**

This part of the report is based upon

- 1 Verbal autopsy
- 2 Anthropometry of siblings and family members
- 3 Community Situation of Food Security
- 4 Community Child Death Rates

These are used to argue the following points -

- 1 Evidence that the dead child was already malnourished ( description of physical appearance, hair, skin, nails, previous anthropometric /medical records, siblings and other family members being malnourished – by anthropometry)
- 2 Evidence that there was acute shortage of food to the individual. This is done by relating dietary history for the last few days to caloric intake. Since this is relatively difficult for a child, specially a breast feeding child, this part of the report should be commented upon by the technical support team (nutritionist / pediatrician)
- 3 Evidence that there was an acute shortage of food in the household ( dietary history of other household members, examination of household food supplies, loan taken recently, recent migration of able bodied family members, eating of unusual food, recent beggary / crime for food, failure to receive food from PDS, ICDS or any other schemes due to non availability, illness or debility)
- 4 Evidence that there is an abnormally raised child death rate in the community (section 2 of the report). Even if the terminal event in most of the deaths are infections (diarrhea, pneumonia, measles) if the death rate is significantly higher than the under five death rate for rural areas in the state, this is evidence of hunger related deaths provided there is a community setting of food insecurity.

### **Infection as the terminal event**

When the terminal event is an infectious disease, which is the commonest scenario, such as pneumonia or diarrhoea, the 'diagnosis' of starvation death need not change.

This logical progression to disease, which forms the terminal event, is well

documented in cases of starvation. The last two points suffice to call a death a starvation death.

If there has been an outbreak of a disease (e.g. measles) and all the deaths have been attributed to the outbreak, the logical argument in the context of starvation would be that normally speaking the mortality of a disease does not exceed x percent of cases. The fact that mortality has been so much higher proves that death was due to starvation, not disease.

## **7. Details of starvation deaths among adults**

This part of the report depends upon -

- 1 Verbal autopsy and dietary history
- 2 Anthropometry of family members

### **Verbal autopsy**

*This is to establish that death did not take place due to accident or other physical trauma, and to document the clinical events preceding death, as also dietary history and body appearance.*

The dietary history component should be analysed in terms of caloric value by referring to the charts of caloric values of local food for assistance or taking the assistance of the technical support group. Caloric intake of less than 850kcal per day for an adult establishes the diagnosis of starvation.

Food security of the family – substantiating findings of food stores within the family, recent loans, migration of able-bodied members, eating of unusual foods, beggary should be documented.

### **Anthropometry of surviving family members**

BMI of less than 18.5 amongst adults of the family, and weight for age less than 3SD in the children is supportive evidence that the whole family is in a situation of starvation.

## 8. Community situation of food security

The provision of supplies, access and uptake from PDS, Food for Work Programmes if any, ICDS, Mid Day Meal, maternity benefit and other schemes should be described.

## 9. Hunger pyramid for the community

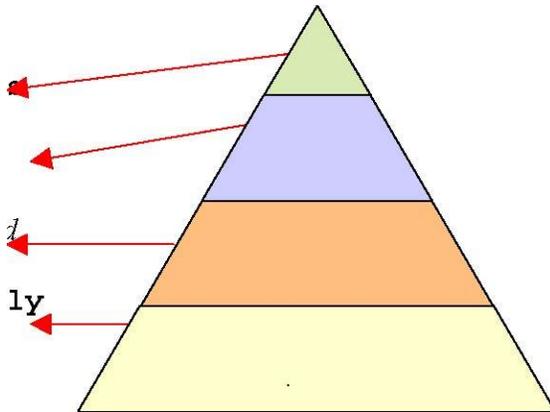
The above mentioned two objectives are fulfilled by drawing the entire 'hunger pyramid' that prevails within a community, of which the starvation death/s are only the tip.

### Starvation deaths

*Starving population Severely undernourished*

**Mild to Moderately**

*undernourished*



Appropriate figures or percentages should be given for each of these categories, to give a complete idea of the situation, e.g. in a particular village -

**Starvation deaths - 6 persons (4 adults, 2 children) Starving population - 7%  
families Severely undernourished - 15% adults, 18% children**

Mild to Moderately undernourished – 43% adults, 62% children

**Starvation deaths** are those deaths which have been identified as being due to starvation / malnutrition on the basis of the Verbal autopsy process.

**Starving population** is the proportion of families where adults have a daily caloric intake of less than 850 Kcal.

**Severely undernourished** population is the proportion of adults with BMI < 16 and in case of children, those with weight for age less than 60% of expected. (deduct the proportion of starving population from this to avoid overlap)

**Mild to moderately undernourished** population is proportion of adults with BMI < 18.5, proportion of children with weight for age less than 80% of expected (deduct the previous two proportions from this to avoid overlap)

The investigating team along with the Hunger Watch group should express an overall opinion. This should categorically express an opinion regarding the deaths that have taken place – starvation deaths or not starvation deaths. It should also make a community diagnosis

– community at risk for further starvation deaths (starving community) or not.

## **10. Recommendations**

Finally, the report should make recommendations for immediate action at the local level. Recommendations should include compensation for the deceased, measures to feed and supply food, hospitalization where necessary, arrangements for nutrition rehabilitation, healthcare including immunization, long term food security measures.

*Annexure 5*

**Verbal Autopsy Questionnaire - Adults  
(Above 15 years of age)**

Preliminary Information

Name of the deceased: Date of  
interview: \_\_\_\_\_

Age in years at time of death:

Sex: Male/Female

d. if Female-Pregnant / Lactating/ Neither

Age of eldest living child

Marital status

\* Married \* Unmarried \*Divorced \* Widowed

\*Others

Address:

Name of the informant(s)

Informant's relation to the deceased -

Who, among the informants, was present at the time of the

fatal illness?

Occupation (give details of type of work)

i) Working person, active till death

ii) Working person, stopped working for some period before death (specify period)

iii) Not working person

Family structure -Nuclear / Joint

Total No. of Members

Male adults

Female adults

Children

Income and food supply: (Relates to the family)

Agriculture:

Total Land owned \_\_\_\_\_

Irrigated land owned \_\_\_\_\_

Crop from last harvest was sufficient to adequately

feed the family till which month -

Wages: (In the last six months)

Work as agricultural labour -

No. of days in last 6 months \_\_\_\_\_ Daily

Wage-

Work on Govt. relief works -

No. of days in last 6 months \_\_\_\_\_ Daily

Wage-

Work outside the village (State the type of work)

No. of days in last 6 months \_\_\_\_\_ Daily

Wage-

Any other source of income: \_\_\_\_\_

Has the total income during last six months been sufficient to adequately feed all family members?

Yes No

If not then what was the approximate proportionate decrease (proportion of usual)? -

Which items in the diet specifically were decreased -

Foodgrains (Maize, Wheat, Jowar, Rice etc.)

Pulses

Vegetables

Oil, milk etc.

In the last six months relating to the deceased  
and family

-

Were any unusual or 'famine' foods being eaten  
(roots,  
tubers, leaves etc.)

\_\_\_\_\_ Were other members of the family eating such  
unusual things ?

Any substances being eaten to suppress hunger?

Was the family purchasing PDS rations ?

Did the family avail of drought relief ? Yes /

No

If so in what form?

Deaths of cattle or other animals

Distress sale of cattle, vessels, implements and other  
belongings to obtain food

Borrowing or begging food from neighbours, relatives or

others

Personal habits

i. Smoking Yes No

If yes

Duration

Bidi / cigarette per day

ii. Alcohol Yes No

If yes

Duration

Quantity per day

Date of death

Day Month

Year

Weather at the time of Death:

Extreme cold / Extreme heat /

Neither

Place of Death

i. Home

Staying alone / With family

b. Families in immediate neighborhood: Yes / No Health centre / Hospital

iii On the way to Health Centre/Hospital

iv. Any other

Whether Death Certificate Available

Yes/No

If not why

\_\_\_\_\_ If yes

Mention Cause of Death as certified

2. Medical history related to death

2.1 Was the deceased seeing a health care provider before death: 1.yes 2.no

2.2 If yes, specify (name, profession, address.):

2.3 For how long:

\_\_\_\_\_ years

2.4 For what complaint (specify):

2.5 Was the deceased taking any medication:

1.yes 2.no

2.6 If yes, specify (ask for remaining containers / unused medicines):

2.7 Was the deceased hospitalized before death:

1.yes 2.no

2.8 If yes, specify where (name, address):

2.9 For how long: \_\_\_\_\_  
days

2.10 Did the deceased leave hospital (before death): 1.yes  
2.no

If yes, how many days before death?

\_\_\_\_\_ days

2.11 Did the deceased undergo any surgical operation during this hospitalization: 1.yes 2.no

2.12 If yes, when (before death):

\_\_\_\_\_ days

2.13 Do you know what was the operation: 1.yes 2.no

2.14 If yes, specify \_

2.15 Was the deceased or any member of the family ever told

the nature (the diagnosis) of the illness:

1.yes 2.no

2.16 If yes, what was it (specify as clearly as possible):

Was there any accident / poisoning / bite / burn or other  
unnatural event shortly before death-

1.yes 2.no

2.17.1 If yes, what was the accident:

2.17.2 If yes, specify hours / days before death:

2.18 Where did the accident occur:

1. at work

1 road (vehicular accident)

2 at home

3 other (specify):

\_\_\_\_\_2.19 Organs/part of body injured during  
accident\_\_\_\_\_

2.20 Other unnatural events-

Drowning

Poisoning

Hanging

Bite by snake or other venomous animal

Burns

Violence

Any other (specify)

How long before the death did this event take place?

(Hours / days)\_\_\_\_\_

Details of the event (in case of poisoning, what agent was  
used; in case of violence, what type of violence etc.)

3. Specific disease related information

### 3.0 Open ended question about the illness -

According to what you know what did the deceased die of and how? Please narrate.

(All questions in the sections below pertain to the illness immediately preceding death unless specified otherwise)

### 3.1 Cardiovascular system

Did the deceased ever complain of unusual breathlessness? :

1.yes 2.no

If yes, was it on:

Exertion: 1.yes 2.no

If yes, how much exertion:

- 1 Walking on level surface
- 2 Walking up an incline
- 3 Climbing stairs

Breathlessness while lying down flat: 1.yes

2.no

At night, relieved by sitting up in bed:1.yes

2.no

3.1.2 Did the deceased ever complain of chest pain: 1.yes

2.no

If yes:

3.1.2.1 Was it persistent for several hours:

1.yes 2.no

Was it accompanied by excessive sweating: 1. Yes

2. No

3.1.2.2 Was it relieved by rest:

1.yes 2.no

3.1.2.3. Did the deceased ever complain of cyanosis on the lips, fingers or nails: 1.yes 2.no

3.1.2.4 Did the deceased ever complain of swelling on the

body (the lower limbs, foot and leg, eyelids, abdomen, back):

especially if lying down:1.yes 2.no

3.1.2.5 Did the deceased ever complain of an episode of

palpitations (sudden rapid heart beats for one hour or more):

1.yes 2.no

3.1.2.6 Did the deceased ever complain of recurrent sore throat, joint pain and inflammation (migrating, fleeting and affecting several joints):

1.yes 2.no

### **Respiratory system**

3.2.1 Did the deceased have cough: 1.yes  
2.no

3.2.2 Dry cough / Productive cough  
If productive, was the sputum:

3.2.2.1 Clear and sticky:  
1.yes 2.no

3.2.2.2 Yellowish or greenish: 1.yes  
2.no

3.2.2.3 Stained with blood: 1.yes  
2.no

3.2.2.4 Whether large quantity of sputum and offensive  
smell: 1.yes 2.no

Duration of the cough \_\_\_\_\_

Was the cough related to season ? If so, in which season

was it worse? \_\_\_\_\_

3.2.5 Chest pain: 1.yes 2.no

If yes

3.2.5.1 Was it increased with cough and / or deep breath :

1.yes 2.no

3.2.5.2 Was it localized and tender:

1.yes 2.no

3.2.6 Wheezing:

1.yes 2.no

### **Digestive system**

Did the deceased ever complain of:

3.3.1 Abdominal pain 1.yes

2.no

If yes, since when?

Was the pain

3.3.1.1 Persistent:

1.yes 2.no

3.3.1.2 Localized over one area: 1.yes

2.no

If yes:

3.3.1.2.1 Central abdomen: 1.yes

2.no

3.3.1.2.2 Left upper abdomen 1.yes

2.no

3.3.1.2.3.Right upper abdomen 1.yes

2.no

3.3.1.2.4 Lower abdomen 1.yes

2.no

If yes then - left side

right side

entire lower abdomen

3.3.1.2.5 Loin radiating to the groin (inguinal region)

1.yes 2.no

3.3.1.2.6 Relieved by meals (food):

1.yes 2.no

3.3.1.2.7 Aggravated by meals (food):

1.yes 2.no

3.3.2 Persistent heartburn:

1.yes 2.no

3.3.2.1 Was it sometimes accompanied by water brash  
(belching of sour fluid in the mouth :

1.yes

2.no

3.3.3 Diarrhoea:

1.yes 2.no

If yes, was it:

3.3.3.1 Acute (less than 15 days)

3.3.3.2 Chronic (more than 15 days)

3.3.3.3 Accompanied by blood

1.yes

2.no

Alternating with constipation:

1.yes      2.no

3.3.4 Vomiting blood: 1.yes 2.no

If yes:

3.3.4.1 Was the blood:

1.bright red 2.dark brown

3.3.4.2 Did this vomiting of blood last until death:1.yes

2.no

3.3.4.3 For how long before death:

\_\_\_\_\_ month(s)

3.3.4.4 Was the deceased or any member of the family  
informed of the nature or the cause of this  
vomiting blood:

1.yes 2.no

If yes:

3.3.4.5 What was it

3.3.5 Normal stools with blood in the stools: 1.yes

2.no

If yes:

3.3.5.1 Was the blood:

1.red 2.dark brown

3.3.5.2 Did the symptoms last until death:

1.yes

2.no

If yes:

3.3.5.2.1 For how long before death:

months

3.3.5.3 Was the deceased or any member of the family

informed of the nature or cause:

1.yes 2.no

If yes:

3.3.5.3.1 What was it:

3.3.6 Jaundice:

1.yes 2.no

If yes:

3.3.6.1 For how long before death:

\_\_\_\_\_ days

3.3.6.2 Did jaundice last until death:

1.yes 2.no

3.3.6.3 Was the deceased or any member of the family told of its nature or cause:

1.yes 2.no

If yes:

3.3.6.3.1 What was it:

3.3.7 Persistent vomiting:

1.yes 2.no

If yes:

3.3.7.1 Did it last until death:

1.yes

2.no

\_\_\_\_\_ days

3.3.7.1.1 What was the duration: (before death):

\_\_\_\_\_ days

### **Urinary system**

3.4.1 Did the deceased ever complain of one of the

following symptoms:

3.4.2 Blood in urine:

1.yes

2.no

If yes:

3.4.2.1 Did blood in urine last until death:

1.yes 2.no

If yes:

3.4.2.1.1 For how long (before death):

\_\_\_\_\_month(s)

3.4.2.1.2 Was Blood in urine ever associated with pain:

1.yes 2.no

3.4.2.2 Was blood in urine: 1.persistent

2.intermittent

3.4.3 Problems in urination:

1.yes

2.no

If yes:

3.4.3.1 Decreased volume of urine: 1.yes

2.no

3.4.3.2 Complete retention of urine lasting for more than a

few hours:

1.yes 2.no

If yes:

3.4.3.2.1 Was this retention:

1.recurrent 2.transient

3.4.3.2.2 Did this retention last until death: 1. yes 2. no

### **3.5 Infectious diseases**

3.5.1 Did the deceased ever complain of fever in the month prior to death:

1. continuous 2. intermittent 3. never complained

If continuous or intermittent:

3.5.1.1 Did fever last until death: 1. yes 2. no

If yes:

Was the fever on alternate days or every day at a fixed

time? \_\_\_\_\_

Were there chills / rigors accompanying the fever?

Was there continuous fever for more than one week?

3.5.1.2 Was the deceased or any member of the family ever

informed of the nature of the diagnosis

of this fever:

1.yes 2.no

If yes:

3.5.1.2.1 What was it:

### **Reproductive mortality**

If the deceased is a female aged 12-50 years:

3.6.1 If married and living with her husband OR separated,

divorced, or widowed for less than 3 months,

did she complain before she died of:

3.6.2.1 Continuous fever: 1. yes

2. no

3.6.2.2 Vaginal bleeding: 1. yes

2. no

3.6.2.3 Abortion (up to 42 days (6 weeks) before death): 1.  
yes 2. no

3.6.3 Was she pregnant and delivered before her death (up

to 6 weeks before death) regardless of gestation

age:

1. yes 2. no

If yes:

3.6.3.1 Where did the delivery take place: 1.  
hospital 2. home 3. other

(specify)

Any significant symptoms or events related to the pregnancy

or delivery

Unusually large amount of vaginal bleeding before / during  
/ after delivery

Inability to deliver within 24 hours of onset of labour

Severe continuous pain in the abdomen during labour

Pain in lower abdomen with fever / foul discharge after  
delivery

### **Malignancies**

Did the deceased ever complain of:

3.7.1 The presence of any mass or tumour in any part of the

body: 1.yes 2.no

If yes:

3.7.1.1 Where: (specify, if a woman emphasize mass in breast)

3.7.1.2 Did this tumour persist until death:

1.yes 2.no

3.7.2 Continuous loss of weight with no apparent reason

1.yes 2.no

3.7.3 Abnormal vaginal bleeding aside from the menstrual cycle especially after menopause

3.7.4 Lump in the cheek / tongue

3.7.5 Was the deceased or any member of the family ever informed of the possible existence of a malignant tumour or growth:

1.yes 2.no

If yes:

3.7.4.1 Where in the body (specify as clearly as possible)

:

3.7.4.2 What was the outlook for the patient:

1.not mentioned

2.good

3.reserved

4.bad (fatal)

Did the person have obvious loss of weight in the three months prior to death?

### **3.8 Other**

Did the person have paralysis / extreme weakness on one side or a particular part of the body?

Did s/he have severe continuous unremitting headache ?

If yes, was there accompanying fever and inability to bend the head forwards?

Did s/he have convulsions? If yes, did these last until death?

Was the body stiff/ arched back for some hours or days before death?

Was the person unconscious before death? if so, for what

duration?

Specific information related to

malnutrition / starvation

Food intake (semi-quantitative) - here

the interviewer has

to estimate the caloric intake if possible

based on detailed

dietary history.

Daily intake during the week prior to

death

How many meals did the deceased have

in a day ?

Morning

Noon

Afternoon / evening

Night

Other meals / snacks

(Quantify exact amounts of roti, rice,

ghat / rabdi

(porridge), dal etc. as far as possible)

Was this food enough to satisfy his

hunger?

Daily intake during the month prior to

death

How many meals did the deceased have

in a day ?

Morning

Noon

Afternoon / evening

Night

Other meals / snacks

Was this food enough to satisfy his  
hunger?

4.2 a. Water intake - Normal / reduced /  
increased / do not know

b. Source of Water -

Did s/he complain of

Constant complaint of hunger

Loss of feeling of Hunger

Dizziness on standing up

Extreme weakness and inability to walk

Inability to see at night

What were the observations of the family members regarding  
the deceased person:

Eyes: Sunken/ Normal/ Do not know

Skin: Creases, wrinkles over forehead and face as usual  
Increased

Do not know

Normal / Scaling or peeling / Do not know Hair: Normal / Dry or discoloured / Do not know Cheeks : As usual/ very sunken /Do not know Ribs: As usual / very prominent/ Do not know Limb bones : As usual / prominent/ Do not know Abdomen: As usual/ very sunken /Do not know Hipbones : As usual/ prominent and projecting /Do not know Tongue: Dry / coated or fissured / Do not know Normal pink colour / very pale or whitish / Do not know Lips: Normal / Dry or cracked / Do not know Gums : normal / loose teeth, bleeding / do not know

Swelling over Ankle : Y/N

If yes -unilateral / bilateral Face : Y/N Upper limbs: Y/N

Palms and nails: Normal pink colour / very pale or whitish / do not know

Body temp : Normal / Cold / Do not know

Bed sores : None

If yes, site : Shoulder blade/ Lower back /

Hip/Calf

/Other part

Behavioral changes: None /Muttering or irrelevant talk / Unconscious

5. Presumed cause of death

5.1 From death certificate if available:

5.2 From verbal autopsy form:

5.21 Immediate cause of death:

5.22 Underlying cause(s) of death

5.23 Contributory cause(s) of death:

Questionnaire modified from - Mortality and causes of death  
in Jordan 1995-96:assessment by verbal autopsy

S.A. Khoury, D. Massad, T. Fardous,  
Bulletin of the World Health Organization, 1999, 77 (8)

### **Verbal Autopsy Questionnaire for Children**

*Instructions to interviewer: Introduce yourself and explain the  
purpose of your visit. Ask to speak to the mother or to another  
adult carer who was present during the illness that lead to death.  
If this is not possible, arrange a time to revisit the household  
when the mother or carer will be home.*

#### **Section 1: Background information on child and household**

*(To be filled in before interview)*

1.1 Address of household

1.2 Name of child

1.3 Sex of child: 1. Male 2. Female

**Section 2: Background information about the interview**

2.1 Language of interview \_\_\_\_\_

**day/month/year**

Date of first interview  
attempt \_\_\_\_\_

Date of second interview attempt \_\_\_\_\_

Date of third interview  
attempt \_\_\_\_\_

Date of interview \_\_\_\_\_

**Section 3: Information about carer/respondent**

3.1 What is the name of the main respondent?

3.2 What is the relationship of main respondent to deceased child? (*tick relevant box*)

Mother

Maternal Grandmother

Paternal Grandmother

Maternal

Grandfather

Paternal

Grandfather

Paternal Uncle

Maternal Uncle

Maternal Aunt's

Husband

Paternal Aunt's

Husband

Maternal Aunt

Paternal Aunt

Paternal Uncle's

wife

Maternal Uncle's

wife

Elder brother

Elder sister

1. Other male (specify) \_\_\_\_\_

17. Other female (specify) \_\_\_\_\_

3.3 What is the age of main respondent (in years) \_\_\_\_ \_\_\_\_

3.4 How many years of school did the main respondent

complete? \_\_\_ \_\_\_

3.5 Were other people present at the interview?

1. Yes 2. No (*If "No", go to question 3.5.3*)

3.5.1 Of those present at the interview, which were present at the illness that led to death/hospitalization?

3.5.2 Total number giving information at interview \_\_\_ \_\_\_

3.5.3 If mother is not present at the interview, is the mother still alive? Yes No

#### **Section 4: Information about the child**

4.1 Date of birth of child: \_\_\_/\_\_\_/\_\_\_ (dd mm yy)

4.2 What was the date of death? \_\_\_/\_\_\_/\_\_\_ (dd mm yy)

4.3 Where did the child die? (*tick relevant box*)

1 Hospital

2 Other health facility

3 On route to hospital or health facility

4 Home

5 Other (specify \_\_\_\_\_)

4.3.3 For deaths at hospital or health facility, record facility name and address:

### **Section 5: Open history question**

5.1 Could you tell me about the child's illness that led to death?

Prompt: Was there anything else?

*Instructions to interviewer - Allow the respondent to tell you about the illness in his or her own words. Do not prompt except for asking whether there was anything else after the respondent finishes. Keep prompting until the respondent says there was nothing else. While recording, underline any unfamiliar terms.*

*Take a moment to tick all items mentioned spontaneously in the open history questionnaire.*

5.3 Was care sought outside the home while he/she had this illness?

1. Yes 2. No 3. Don't know (*If "No" or "Don't know", go to section 6*)

5.3.1 (*If yes ask:*) Where or from whom did you seek care? (*Record all responses*)

1 Traditional healer . . . . .  
.....

2 Governmental health centre or clinic . . . . .  
.....

1 Government hospital . . . . .  
.....

2 Community-based practitioner associated with health system including trained birth attendants..

3 Private physician . . . . .  
.....

4 Pharmacy, drug seller, store, market . . . . .  
.....

5 Other provider . . . . .  
.....

8. Relative, friend (outside household) . . . . .  
.....

*After respondent finishes prompt: Did you seek care anywhere else?  
Keep using this prompt until respondent replies that they did not  
seek*

*care from anyone else.*

*Note: Above categories should be country-specific.*

## **Section 6: Accident**

6.1 Did the child die from an accident, injury, poisoning,  
bite, burn or drowning?

1. Yes 2. No. 3. Don't know (*If "No" or "Don't know", go to section 7*)

6.1.1 (*If yes ask*): What kind of injury or accident? *Allow respondent to answer spontaneously. If respondent has difficulty identifying the injury or accident, read the list slowly.*

1. Motor vehicle accident 2. Fall

3. Drowning 4. Poisoning

5. Bite or sting by venomous animals 6. Burn

7. Other injury (specify) \_\_\_\_\_

6.1.2 How long did the child survive after the injury,  
poisoning, bite, burn or drowning?

1. Died within 24 hours

2. Died 1 day later or more

### **Section 7: Age determination and reconfirmation**

7.1 Record the child's date of birth from question 4 \_\_/\_\_/\_\_ dd mm yy

Record child's date of death from question 4.2 \_\_/\_\_/\_\_ dd mm yy

7.2 Take a moment and calculate the age of the child at the time of death. Read out:

I have calculated that the child was \_\_ \_\_ \_\_ days (or months or years old as appropriate) at the time of death. Is this correct?

*If the respondent indicates this is not correct, reconcile the inconsistency by re-checking the child's date of birth and date of death. Make the necessary corrections here and in section 4.*

If child died within 24 hours from injury or accident, go to section 10 – treatment and records. If child was less than 28 days old do not record any details as that is beyond the purview of this study. If child was 28 days old or more at the time of death, go to section 8 – post-neonatal deaths

### **Section 8: Post-neonatal deaths**

8.1 During the illness that led to death, did he/she have a fever?

1. Yes 2. No 3. Don't know (If "No" or "Don't know", go to question 8.2)

8.1.1 (*If fever ask*): How many days did the fever last? . . . . . \_\_ \_\_ days

8.2 During the illness that led to death, did \_\_\_\_\_

have frequent loose or  
liquid stools?

1. Yes 2. No 3. Don't know

8.2 During the illness that led to death, did he/she  
have (local terms for diarrhoea)?

*Note: When preparing the country-specific  
questionnaire,  
include local terms for  
diarrhoea.*

1. Yes 2. No 3. Don't know

*(If "No" or "Don't know", for both questions 8.2 and 8.3, go to question 8.4)*

8.3.1 (*If frequent or loose stools or local terms for diarrhoea ask*):

For how many days did he/she have loose or liquid stools?  
. . . . \_\_ \_\_ days

8.3.2 Was there visible blood in the loose or liquid  
stools?

1. Yes 2. No 3. Don't know

8.3.3 During the time with the loose or liquid stools, did the child drink 'Rabdi' or 'Salt and Sugar solution' or ORS?

1. Yes 2. No 3. Don't know

8.3.4 During the illness that led to death, did the child have a cough?

1. Yes 2. No 3. Don't know

*(If "No" or "Don't know", go to question 8.5)*

8.5 During the illness that led to death, did the child have difficult breathing?

1. Yes 2. No 3. Don't know *(If "No" or Don't know", go to question 8.6)*

8.6 During the illness that led to death, did the child have fast breathing? 1. Yes 2. No 3. Don't know *(If "No" or Don't know", go to question 8.7)*

*(If yes ask):* For how many days did the difficult breathing last? \_\_\_ \_\_\_ days

8.6.1 *(If yes ask):* For how many days did the fast breathing last? . . . . \_\_\_ \_\_\_ days

8.7 During the illness that led to death, did he/she have indrawing of the chest?

1. Yes 2. No 3. Don't know

8.8 During the illness that led to death, did he/she have noisy breathing?

*(Demonstrate each sound)*

8.8.1 Stridor . . . . . 1. Yes

2. No 3. Don't know

8.8.2 Grunting . . . . . 1. Yes

2. No 3. Don't know

8.8.3 Wheezing . . . . . 1. Yes

2. No 3. Don't know

8.9 During the illness that led to death, did his/her nostrils flare with breathing?

1. Yes 2. No 3. Don't know

8.10 During the illness that led to death, did the child have pneumonia?

1. Yes 2. No 3. Don't know

*Note: When preparing country-specific questionnaires include local terms for pneumonia here.*

8.11 Did the child experience any generalized convulsions/fits during the illness that led to death?

1. Yes 2. No

3. Don't know

8.13 Was the child unconscious during the illness that led to death?

1. Yes 2. No

3. Don't know

8.14 At any time during the illness that led to death, did the child stop being able to grasp?

1. Yes 2. No

3. Don't know

*(If "No" or Don't know", go to question 8.14)*

8.15 At any time during the illness that led to death, did the child stop being able to respond to a voice?

1. Yes 2. No 3.

Don't know

*(If "No" or Don't know", go to question 8.15)*

8.16 At any time during the illness that led to death, did the child stop being able to follow movements with their eyes?

1. Yes 2. No 3.

Don't know

*(If "No" or Don't know", go to question 8.16)*

8.15.1 *(If yes, ask)*: How long before he/she died did the child stop being able to follow movements with their eyes?

1 Less than 12 hours

2 12 hours or more

8.17 Did the child have a stiff neck during the illness that led to death?

*(Demonstrate)* 1. Yes 2. No 3. Don't know

8.18 Did the child have a bulging fontanelle during the illness that led to death?

1. Yes 2. No

3. Don't know

8.19 During the month before he/she died, did the child have a skin rash?

1. Yes 2. No 3. Don't know

*(If "No" or Don't know", go to question 8.18)*

8.18.1 *(If yes, ask)* Was the rash all over the child's body?

1. Yes 2. No 3. Don't know

8.18.2 Was the rash also on the child's face?

1. Yes 2. No 3. Don't know

8.18.3 How many days did the rash last? . . . \_\_ \_\_. \_\_ \_\_ days

8.18.4 Did the rash have blisters containing clear fluid?

1. Yes 2. No 3. Don't know

8.18.5 Did the skin crack/split or peel after the rash started?

1. Yes know

2. No

3. Don't

8.18.6 Was this illness "measles"?

1. Yes know

2. No

3. Don't

*Note: When preparing country-specific questionnaire include local*

*term for measles.*

8.18 During the illness that led to death, did the child become very thin?

1. Yes 2. No 3. Don't know

8.20 During the illness that led to death, did the child have swollen legs or feet?

8.21

1. Yes 2. No 3. Don't know

*(If "No" or Don't know", go to question 8.21)*

8.20.1 *(If yes, ask):* How long did the swelling last? Number of weeks \_\_ \_\_

8.22 During the illness that led to death, did the child's skin flake off in patches?

1. Yes 2. No 3. Don't know

8.23 Did the child's hair change in colour to a reddish (or yellowish) colour?

1. Yes 2. No 3. Don't know

*Note: When preparing country-specific questionnaire, terms for colour to be locally adapted.*

Did the child have "marasmus" during the month before he/she died?

1. Yes 2. No

3. Don't know

*Note: When preparing country-specific questionnaire, local terms for marasmus should be included.*

8.24 During the illness that led to death, did the child suffer from "lack of blood" or "pallor"?

1. Yes 2. No 3. Don't know

*Note: When preparing country-specific questionnaire, local terms for "lack of blood" or "pallor" should be included .*

8.25 During the illness that led to death, did the child

have pale palms?

1. Yes 2. No 3. Don't know

*Note: When preparing country-specific questionnaire, local terms for "pale palms" should be included.*

8.2.7 During the illness that led to death, did the child have white nails? (*Show photo if possible*)

1. Yes 2. No 3. Don't know

*Note: When preparing country-specific questionnaire local terms for "white nails" should be included here.*

8.26 During the illness that led to death, did the child have swellings in the armpits?

1. Yes 2. No 3. Don't know

8.27 During the illness that led to death, did the child have swellings in the groin?

1. Yes 2. No 3. Don't know

8.28 During the illness that led to death, did the child have a whitish rash inside the mouth or on the tongue?

1. Yes 2. No 3. Don't know

9. Information about the Nutritional status of the child

**9.1 What and how much was the child eating about one week before death?**

9.1.1 How many meals did the child have in a day?

9.1.2 Approximately what and how much was the child eating in the

Morning

Afternoon

Evening

Night

Other

*(Try to quantify approximately how much each of Roti,*

*Ghat, Raabdi. Etc)*

9.1.3 Was this food enough to satisfy the child's hunger?

**9.2 What and how much was the child eating about one month before death?**

9.2.1 How many meals did the child have in a day?

9.2.2. Approximately what and how much was the child eating in the

Morning

Afternoon

Evening

Night

Other

*(Try to quantify approximately how much each of Roti,*

*Ghat, Raabdi. Etc)*

9.2.3 Was this food enough to satisfy the child's hunger?

**9.3 What and how much was the child eating about three months before death?**

9.3.1 How many meals did the child have in a day?

9.3.2 Approximately what and how much was the child eating in the

Morning

Afternoon

Evening

Night

Other

*(Try to quantify approximately how much each of Roti, Ghat, Raabdi. Etc)*

9.3.3 Was this food enough to satisfy the child's hunger?

9.4 Was the child being given any unusual foods apart from what is usually given? (e.g. leaves, roots, tubers)

Were others in the family also eating such unusual foods?

Were any foods being eaten to suppress hunger?

**9.5 Information about the Income and Food security of the family.**

9.5.1 Agriculture

Total land owned-

Total irrigated land owned

Harvest of the previous year was sufficient to feed the family for how many months?

9.5.2 Labour

Work in the form of agricultural labourer- No. of days in the last six months

Work as daily labourer-

- Work obtained in the relief work started by the Government-How many days in the last six months-

Daily wages-\_\_\_\_\_

- Work obtained outside the village-How many days in the last six months-

Daily wages-\_\_\_\_\_

9.5.6 Was the income in the last six months enough to adequately feed the family?

9.5.7 If not then how much was the decrease ?

(Approximately estimate what proportionate paise of a rupee)

The decrease was seen in which eatables

- 1 Main food (Maize, Jowar, Rice, Wheat)
- 2 Pulses
- 3 Vegetables
- 4 Oil. Milk etc

5 Meat, Fish, Eggs etc

9.6 How much water was the child drinking in the week before death ?

1 Usual quantity

2 Less than usual

3 More than usual

4 Do not know

9.7 Did the child suffer from 'Night Blindness' ?

1. Yes 2. No 3. Do not know

9.8 Were the corners of the child's mouth cracked, or did he/she have ulcers in the mouth/ tongue?

1. Yes 2. No 3. Do not know

9.9 Did the child have problems such as bleeding gums or loose teeth?

1. Yes 2. No 3. Do not know

9.10 Did the child have 'bow legs' ?

1. Yes 2. No 3. Do not know

### **Section 10: Treatment and records**

I would now like to ask a few questions about any drugs the child may have received during the illness that led to death.

10.2 Do you have any prescriptions, case papers or other health records that belonged to the child ?

1. Yes 2. No 3. Don't know

*(If "No" or Don't know", go to question 10.5)*

10.2.1 *(If yes ask):* Can I see the health records?

1. Yes 2. No 3. Don't know

*(If "No" or Don't know ", go to question 10.5)*

*If respondent allows you to see the health records,  
transcribe all the entries within the*

*12 months before the child died.*

10.3 Weights (most recent two)

10.3.1 Record the dates of the most recent weight, two

weights

1     \_\_ / \_\_ / \_\_ (dd/mm/yy)

2     \_\_ / \_\_ / \_\_ (dd/mm/yy)

10.3.2 Record the most recent two weights .

1 \_\_\_\_\_

2 \_\_\_\_\_

10.4 Medical notes

10.4.1 Record the date of the last note. . . \_\_ / \_\_ / \_\_ (dd/mm/yy)

10.4.2 Transcribe the note

10.5 Was a death certificate issued?

1. Yes 2. No 3. Don't

know

*(If "No" or Don't know", go to question 10.7)*

*INSTRUCTIONS TO INTERVIEWER - Ask to see the death certificate and record whether you have been able to see it.*

10.5.1 Able to see death certificate?

1. Yes 2. No (*If "No", go to question 10.7*)

10.6 Record the immediate cause of death from the certificate

\_\_\_\_\_

Record the first underlying cause of death from the certificate \_\_\_\_\_

Record the contributing cause(s) of death from the certificate \_\_\_\_\_  
Now I would like to ask a few questions about the child's mother.

10.7 Has the child's mother ever been tested for "HIV"?

1. Yes 2. No 3. Don't know

*(If "No" or Don't know", go to question 10.8)*

10.7.1 (*If yes ask*): Was the "HIV" test ever positive?

1. Yes 2. No 3. Don't know

10.8 Has the child's (biological) mother ever been told she had "AIDS" by a health worker?

1. Yes 2. No 3. Don't know

11. From verbal autopsy  
form: \_\_\_\_\_

11.1 Immediate cause of  
death: \_\_\_\_\_

11.2 Underlying cause(s) of  
death: \_\_\_\_\_

11.3 Contributory cause(s) of  
death: \_\_\_\_\_

END OF INTERVIEW

**THANK RESPONDENT(S) FOR THEIR COOPERATION**

*(Modified from - WHO/CDS/CSR/ISR/99.4; A STANDARD VERBAL AUTOPSY METHOD  
FOR INVESTIGATING CAUSES OF DEATH IN INFANTS AND CHILDREN)*

*Annexure II*

**Expected Weight for Age  
(NCHS Standard)**

Age in months	Weights in Kg.	
	Male	Female
12	10.2	9.5
15	10.8	10.1
18	11.5	10.8
21	12.5	11.3
24	12.6	11.9
27	13.1	12.4
30	13.7	12.9
33	14.2	13.4
36	14.7	13.9
39	15.2	14.5
42	15.7	15.1
45	16.2	15.5
48	16.7	16
51	17.2	16.4
54	17.7	16.8
57	18.2	17.2
60	18.7	17.7
63	19.2	18.1
66	19.7	18.6
69	20.2	19.5
72	20.7	19.5
75	21.2	20

*Reference-Weight in Kg are 50<sup>th</sup> percentiles of Boys and Girls;*

*NCHS growth curves for children, Birth-18 yrs. National Centre for Health Statistics,*

Annexure III

**IAP classification for weight for age**

<b>Weight for Age</b>			
<b>Years</b>	<b>A</b>	<b>B</b>	<b>G</b>
	<b>ge</b>	<b>oys</b>	<b>irls</b>
1	12	10.2	9.5
1.3 m	15	10.8	10.1
1 1/2	18	11.5	10.8
1.9 m	21	12.5	11.3
2	24	12.6	11.9
2.3 m	27	13.1	12.4
2 1/2	30	13.7	12.9
2.9 m	33	14.2	13.4
3	36	14.7	13.9
3.3 m	39	15.2	14.5
3 1/2	42	15.7	15.1

				5.1
3.9 m	45	16.2	1	5.5
4	48	16.7	1.6	
4.3 m	51	17.2	1	6.4
4 1/2	54	17.7	1	6.8
4.9 m	57	18.2	1	7.2
5	60	18.7	1	7.7
5.3 m	63	19.2	1	8.1
5 1/2	66	19.7	1	8.6
5.9 m	69	20.2	1	9.5
6	72	20.7	1	9.5
6.3 m	75	21.2	2.0	

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<sup>i</sup> Supreme Court Order dated 28<sup>th</sup> November, 2001.

# **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 population<sup>1</sup>. '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 aggressive<sup>2</sup>.

**Location**<sup>3</sup>-- 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

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<sup>1</sup> Census of India 2001

<sup>2</sup> Encyclopedia of World Cultures, Volume 3 - South Asia by K. Singh

<sup>3</sup> 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 STs<sup>4</sup>. 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

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<sup>4</sup> Census of India 2001

negligance 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 popluation but still they are worst suffers in the block. Feudalistic pressures has barricaded all the door to progress for kol advasi & even put a question mark on the existance of kol advidasi. 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 14<sup>th</sup> 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 Atrilla 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
Ramgadwa	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
<b>Reference :</b> 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 Aaganwadi 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
<b>Total</b>	<b>2998</b>	<b>15016</b>	<b>12018</b>
<b>Reference:</b> 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 has 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. There 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 bad effect on the health of children & are continuously seized by malnutrition.

**Preventing Chronic Hunger, Acute Malnutrition and Starvation: Action 2010**

**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><b>There has been no starvation deaths reported</b> 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	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	

			<p>and appropriate steps if such situation arises.</p> <p>Judging from the consolidated reports furnished by the CDPO, the status of 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 1<sup>st</sup> 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 Officials, Project Officials with the Officials and functionaries of the Health &amp; 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 <sup>th</sup> 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 <sup>th</sup> 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 suppleenting 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</p>	

			constant vigil against this pernicious evil needs to be maintained and we intend to remain vigilant.	
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### 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 2003<sup>1</sup>.

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

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<sup>1</sup> 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 Economics, University of Mumbai), Sanjay Rode (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 starving<sup>2</sup>.

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<sup>2</sup> 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 adults<sup>3</sup>. 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.

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### ***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

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<sup>3</sup> '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 Orissa<sup>4</sup> 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

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

(NHRC)<sup>5</sup>, '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

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<sup>5</sup> 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.

# 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.



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