

**EAT LESS, SLEEP LESS, AND WORK MORE:**  
**Situational Analysis of Food Insecurity in**  
**Urban Slums of Mumbai**



**Bombay Urban Industrial League for Development**

**&**

**Bread For The World**

**EAT LESS, SLEEP LESS, AND WORK MORE:**

**Situational Analysis of Food Insecurity in  
Urban Slums of Mumbai,**

**December 2009 - February 2010**

Research Project Conducted by

**BOMBAY URBAN INDUSTRIAL LEAGUE FOR DEVELOPMENT (BUILD)**

For

**Bread For The World, Germany**

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Mumbai with its estimated twenty million population of which 60% living in slums an extensive study is nearly impossible. However this micro study will surely show the patterns of food (in)security in different slum pockets of Mumbai. We are hopeful this study will benefit many researchers, social workers who are engaged in the struggles of urban poor in Mumbai or elsewhere.

Rev. George Daniel  
General Secretary  
Bombay Urban Industrial League for Development,  
Mumbai

## A. INTRODUCTION

India has seen an unprecedented rise in food prices in the second half of 2009 without concomitant increase in income or minimum wage. This phenomenon has been termed food inflation in media reports. In simple terms, essential food commodities such as cereals / grains and pulses have become very expensive and consequently unaffordable for some people. The media has reported the excessive distress within households as high cost of many essential food items has forced families to cut down on food items such as vegetables and pulses. Bread for the World (BftW) sponsored BUILD, which serves the urban poor living in slum households in 3 of the 24 municipal wards in Mumbai – P (north), R (South), and H (East) – that fall within BUILD’s service area, to examine the hunger and food security situation among the urban poor systematically and comprehensively. The study was expected to analyze the food insecurity situation in BUILD’s service area; identify the prevalence and extent of the problem; understand the food insecurity situation from the perspective of the poor; identify groups that are most vulnerable; study households in the lowest income group; understand food availability in these areas and report on the government programs and schemes for food and hunger and urban poverty alleviation.

How to study the phenomena of hunger has been a difficult question to answer? Hunger has been defined in two ways: first as the uneasy or painful sensation caused by a lack of food; and second as the recurrent and involuntary lack of access to food. Hunger – both lack of access to food and actual malnutrition – are seen as potential consequences of a root factor – food insecurity. In recent years household food security has become a measure of hunger and potential physical consequences of malnutrition.

*Food security* implies the *ability to secure adequate food*. The World Food Summit (WFS), in 1996, declared that food security at any level was achieved only when “all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.” Food security is now seen as having three dimensions: Availability, Access, and Utilization of food. These concepts are inherently hierarchical with availability necessary but not sufficient to ensure access, which is in turn necessary but not sufficient for effective utilization.

*Availability* reflects the supply side of the food security concept. In order for all people to have “sufficient” food, there must be adequate availability. Thus, the ready availability of nutritionally adequate and safe foods is important in determining food security of any population. *Access* is most closely related to social science concepts of individual or household well-being: what is the range of food choices open to the person(s)? It reflects the demand side of food security. It is an assured ability to acquire acceptable foods in socially acceptable ways (e.g., without resorting to emergency food supplies, scavenging, stealing or other coping strategies). *Utilization* reflects concerns about whether individuals and households make good use of their food access. Do they acquire nutritionally essential foods that they can afford or do they forego nutrient intake in favor of consumption of an inadequately varied diet, of non-food goods and services, or of investment in their future livelihoods?

*Food insecurity* implies a *limited ability to secure adequate food*. *Food insecurity* exists whenever the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain. Food insecurity refers to the social and economic problem of lack of food due to resource or other constraints, not voluntary fasting or dieting or because of illness or for other reasons. Household food insecurity in developing countries is still commonly measured through income, consumption, and even anthropometric indicators that are only distantly, or partially, related to the concept as defined by WFS. Current understanding of household food insecurity was largely influenced by the work of Radimer and colleagues at Cornell; it determined that food insecurity is experienced in 4 primary domains: 1) Uncertainty or Worry over food; 2) Food of Inadequate Quality; 3) Food of Inadequate Quantity; or 4) Food acquired through Socially Unacceptable Means. They suggested

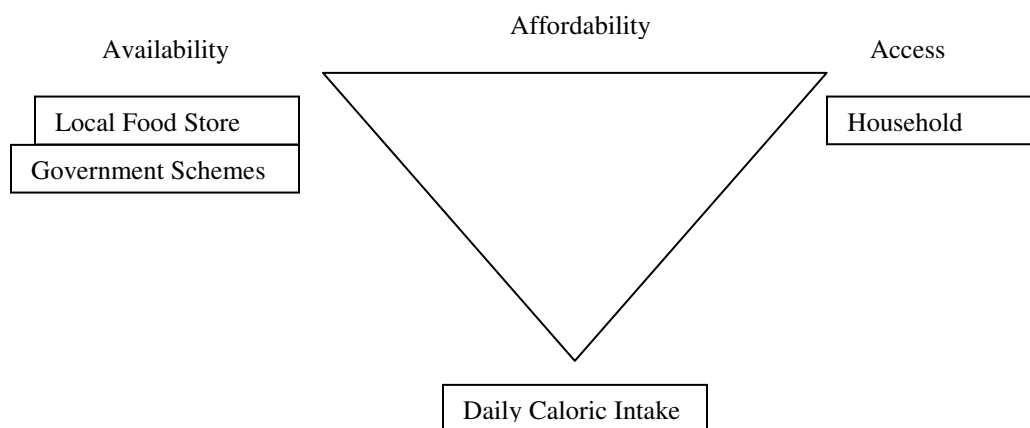
that these 4 domains should form the starting point for defining and measuring household food insecurity more directly than had been done before. The findings reinforced the observation, already common in developing country literature, that food insecurity is largely a “managed process”. People are not passive victims of sudden events but active participants in responding to risks that they face in their daily lives.

Chronic food insecurity reflects a long-term lack of access to adequate food, and is typically associated with structural problems of availability, access or utilization. Hence one of the broader questions for the entire study group was: Does this study simply touch the tip of a crisis that is already unfolding among the underprivileged segments of society? Are some of us chronically vulnerable to food insecurity?

## B. RESEARCH FRAMEWORK AND RESEARCH QUESTIONS

The research objective was to determine the prevalence and extent of food insecurity and hunger and identify the determinants / factors that predispose a household to extreme hunger or food insecurity. In order to understand the food insecurity situation among the urban poor in Mumbai a framework was needed that would help us understand and connect the issue of food availability with access and daily caloric intake in the context of urban poor households. The triangular framework below has Food Availability (in local markets and stores in study area) as one point. The second corner is the household and the household access to food. The third corner is the Daily Caloric Intake per household (the actual physiology).

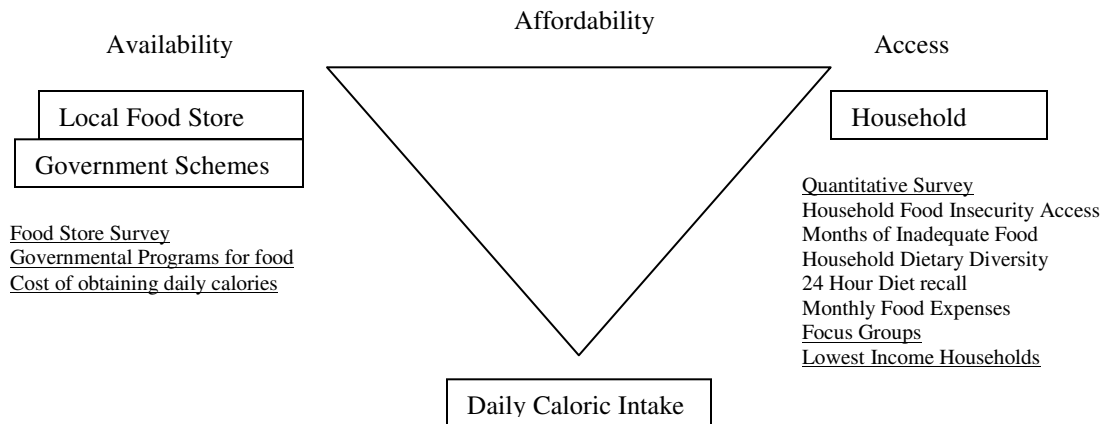
In order to understand the food insecurity situation among urban poor, one has to understand all 3 separately and the connections between the three that lead to the ultimate impact. Lack of availability of food in the local stores and markets would lead to food insecurity and consequent hunger and malnutrition. Thus, it was important to examine the availability of food in local areas through a Food Store Survey. However, if food was available and it was expensive or out of reach for the household, then it would lead to a lack of household access to food. Thus food insecurity would be an access issue and not an availability one. However, if the government anticipated the problems and used government machinery and schemes to make essential food items available through the public distribution system (PDS) or to children through mid-day meal and ICDS schemes, it would address the problem. However, if food in the stores remained expensive and government machineries did not work properly, then the lack of access and / or availability would manifest as some form of decrease in caloric intake (daily caloric intake in urban India is calculated at roughly 2100 calories per day for an adult).



The research objectives were further broken and categorized into research questions and corresponding OR appropriate research methods / studies and instruments. (See table below).

Sr. No	Research Questions	Research Methods / Research Study and Instruments					
		1	2	3	4	5	6
		Quantitative Survey	Focus Groups	Qualitative study of lowest income households	Food Store Survey	Cost of per day calorie requirements	Qualitative study of Government Schemes
i	What is the prevalence of household food insecurity (or food security) in urban poor households in the defined project area?	Household Food Insecurity Access (HFIA) Months of Adequate Household Food Provisioning (MAHFP)					
ii	What is the prevalence of extreme poverty in households in the project area?	Monthly Household Expenses (Food)					
iii	What is the quality of food or dietary diversity in urban poor households?	Household Dietary Diversity (HDDS)	Focus Groups				
iv	What are families eating in (or diet of) urban poor households?	24 Hour Diet Recall	Focus Groups				
v	What are the factors associated with or determining food insecure households?	Socio-demographic data (Bivariate analysis with above)	Focus Groups				
vi	Are there any gender differences in the issue of food (in) security?	Socio-demographic data (Bivariate analysis with above)	Focus Groups				
vii	What are families perceptions about poverty and food insecurity situation?		Focus Groups				
viii	What is the situation in the households in lowest income group?			Observations & Interviews			
ix	What is the "food availability" situation in the project area?				Survey of food stores in project area		
x	What is the cost of obtaining the minimum daily calories?					Survey of stores in local area for food prices	
xi	What are current governmental programs to address food problem faced by poor households and user's perceptions about govt schemes?						Qualitative study of - ICDS - Mid-day meal scheme
xii	What are currently available government programs / schemes for poverty alleviation?						Qualitative study of Available Urban Poverty Alleviation Schemes

The research questions and corresponding research methods / studies can be further mapped to each of the three elements of the triangular framework (see below).



## C. METHODS

### 1. QUANTITATIVE SURVEY:

A cross-sectional interviewer-administered survey of households was conducted in the project areas of BUILD in 3 municipal wards of Mumbai (in addition to focus groups) to assess the prevalence and extent of food (in) security by using various scales and measures of food insecurity such as the Household Food Insecurity Access Scale (HFIAS); Months of Adequate Food Provisioning (MAHFP); Household Dietary Diversity Score (DHHS), 24 hour dietary recall and Monthly Food Expenses. The survey and data collection activities were conducted between December 2009 and January 2010 by trained, local interviewers (master’s students in human and social sciences) who administered a pre-tested instrument in local languages to adult respondents in household units in urban slums in project area of BUILD. All surveys were conducted during the daytime and within the hours of 9 am to 5 pm.

BUILD serves urban slum households in 3 municipal wards (P-North; R-South; H-East). Mumbai is divided into 24 municipal wards by the municipal corporation for administrative purposes. Each ward comprises of families that may either reside in buildings / apartment blocks or in urban slums (and in some cases on the street). Urban slums in Mumbai are organized in large units called “bastis” or nagars and each basti will have a certain number of chawls. These chawls are made up of a set of households / small units or dwellings that are usually 10 feet X 10 feet or lesser.

The sampling method to select respondents for this study followed the cluster sampling approach promoted by the World Health Organization (WHO). Typically, such surveys have 210–300 subjects; are completed in a short period of time; and calculate prevalence within +/- 10 percentage points. This method is also known as the 30x7 method. Internationally, it is one of the most common survey methods for gathering information about immunization coverage, diarrheal diseases, respiratory conditions, or smoking behavior. The 30X7 method is based on a two-stage sampling process, with probability-proportionate-to-size (PPS) sampling of 30 clusters at the first stage and quota sampling of individual respondents / households after a random start of 7–10 subjects per cluster at the second stage. Two-stage cluster surveys are preferable to one-stage, simple random sample surveys because all eligible persons in the population do not have to be identified and listed prior to selection.



In this study, the blocks / units / clusters, the primary sampling units, were chawls. The secondary sampling units or the random interview locations were adult respondents in selected households in those selected chawls. The number of blocks to be surveyed in each ward were selected proportionate to population size (calculated as actual number of chawls) in the slums of the project area. For every 1 chawl in R-South, there were to be 5 chawls from P (North) and 3 chawls from H (East) until a total of 30 was reached. After that interviewers were sent to these 30 chawls from where they interviewed respondents in 10 households starting with a house at a centrally defined point and capturing every 7<sup>th</sup> house to the right from that point. A total of 300 households were surveyed. Data quality checks were conducted during data collection and only 294 respondents / units were chosen for data entry. Data entry and data analysis were conducted in SPSS Version 10.0 for Windows (SPSS Inc.). Quality checks were conducted every day. Univariate analysis was conducted to obtain frequencies and measures of central tendency and dispersion to describe the nominal and continuous variables. Bivariate analysis was conducted using the cross tabs (chi square) for nominal variables and “comparison of means” for bivariate analysis of nominal and continuous variables.

## **2. FOCUS GROUP**

A total of 44 women from urban slum households took part in four focus groups conducted as part of the Food Security study. Each focus group had a similar format. Participants were residents of the project area of BUILD and were selected by the BUILD social worker. Through a facilitated conversation (and question guide), information about household food management practices, household financial status and household financial management approaches, knowledge and assessment of public distribution system for food, the community health care system, and recommendations for improving the overall welfare of the wards, was gathered. The assistant facilitator took copious notes during each of the focus group discussions. In addition to the facilitator and assistant facilitator, a third person was present during the focus group meetings who observed the proceedings and took her own notes. Steps for data analysis included (a) becoming well-acquainted with the transcripts; (b) noting impressions and deriving categories; (c) reviewing and refining categories; (d) developing themes; and (e) reviewing previous steps to derive new themes, commonalities, patterns, and differences. Themes were established both by frequency of occurrence and by importance. Frequency refers either to the number of times it appears in the raw data or by its appearance in most of the focus groups. Importance refers to themes that may occur once or a few times, but contain a critical idea that is relevant to the topic areas being discussed. Trustworthiness of interpretation was established by investigator triangulation. Analysis notes were checked with third observer for agreement on content and coding of themes, and to determine the credibility of the themes. Finally, findings were also shared with some participants to verify that themes emerging from analysis matched participants’ discussions.

## **3. QUALITATIVE STUDY OF 20 LOWEST INCOME FAMILIES (< Rs 4500 per month)**

The research was conducted in the month of January 2010. The research method used was a very simple observational and discussion method. The researcher visited the 20 lowest income families; observed their living conditions; used an informal open-ended question guide to discuss how women from these poorest households were managing the food inflation with their low incomes. Poorest of the poor or lowest income bracket was defined as families with a total monthly household income of Rs 4500 or less (less than \$100 per month). Some closed-ended questions were: Total number of family members, total earning members, food expense per month, and electricity bill expense per month.

## **4. FOOD STORE SURVEY**

The research was conducted in the month of January 2010, in four selected Chawls (Basti’s) across two municipal wards in northwestern Mumbai (project area of BUILD). Two survey questionnaires were

developed for the purpose of this study. Questionnaire 1 entailed the use of a simple observational method, wherein the researcher visited the selected Chawls/Bastis and conducted a food store count followed by categorizing the stores as per the pre-determined format. Questionnaire 2 involved the use of the interview method, wherein the researcher after gaining the required permission interviewed seven types of food stores in each of the selected chawls, assessing the availability and costs of various food items. This survey instrument included food items that were selected to be representative of foods commonly eaten by low-income households.

## **5. COST OF OBTAINING DAILY CALORIE REQUIREMENT FROM LOCAL STORES**

This study was conducted in December, 2009 to assess the cost of purchasing food from local stores (in project area) that would provide the minimum daily requirement of 2100 to 2400 calories. First, the researcher obtained the break-up of total daily calories by type of food item/nutrient that is supposed to supply those calories in a healthy diet. Second, the food items that would provide the required daily calories in required quantity and foods that were reasonably cheap were listed. Then the proportion of required nutrients such as carbohydrates, proteins etc., was listed and the amount/weight of the food item required to provide the necessary daily calories was calculated. Once the researcher had the amount of food to be purchased to obtain the required daily calories from that food item, a structured table was created and the researcher walked the project areas and found shops that sold food grains and other food items (stores that were regularly frequented by our study community). Researcher visited three selected food stores in the project area of BUILD and found the price / cost for that amount of particular food items, and documented the price of exact quantities of food (grains, pulses and vegetables, fruits) that would meet the caloric requirement of one urban person (2100 to 2400 calories). This research was done keeping in mind a family of five members.

## **6. QUALITATIVE STUDY OF GOVERNMENT FOOD SECURITY SCHEMES AND URBAN POVERTY ALLEVIATION**

A focus group discussion was conducted in the month of February, 2010 to assess the functioning of the three most important government food security schemes viz. Public Distribution system (PDS), Integrated Child Development Scheme (ICDS) and the Midday meal scheme; in the project area of BUILD. The participants were beneficiaries from the project area and were selected by the BUILD social worker. The participants responded to a series of questions related to their own experiences, perceptions, and needs with respect to the government food security schemes. At the end of the day the researcher debriefed with the principal investigator and wrote the findings. Findings were shared with three participants to verify if the themes emerging from the analysis captured their thoughts.

The study on the structure and utilization of the Urban Poverty Alleviation schemes was a result of detailed secondary research as well as discussions with beneficiaries of these schemes and the BUILD staff in the month of February, 2010. These discussions were centered on themes including the structure, access and the utilization of the schemes in the project area.

## D. FINDINGS

### 1. QUANTITATIVE SURVEY

Research Questions Answered:

- (i) What is the prevalence of household food insecurity (or food security) in urban poor households in the defined project area?
- (ii) What is the prevalence of extreme poverty in households in the project area?
- (iii) What is the quality of food or dietary diversity in urban poor households?
- (iv) What are families eating in (or diet of) urban poor households?
- (v) What are the factors associated with or determining food insecure households?
- (vi) Are there gender differences in households with respect to food (in) security?

Sample description: 282 respondents (96%) were female and 12 respondents (4%) were male. Ages of respondents ranged from 18 to 72 with a mean of 36.78 and a median of 35; 208 respondents (71%) were Hindus, 45(15%) were Buddhists, 27(9%) were Christian and 14(5%) were Muslim. 239(81%) respondents were married, 17(6%) were unmarried and 37(13%) were widowed. 28% of respondents were housewives and 29% part-time workers; working as housemaids or doing piece-rate based work at home such as stitching clothes, making beads, jewelry assembling. Mean number of family members in a household was 5.08. The mean of the years of education of the respondent was 6.22.

#### **Household Food Insecurity and Access** (see chart below)

As mentioned in the Introduction, food insecurity is experienced in 4 primary domains. The prevalence of these food insecurity factors (proxies for hunger) is provided below:

1) Uncertainty or Worry over food: About 66% or 2 out of 3 households (193 of the total 294 households surveyed) were WORRIED at some point in the past year (2009) that their household would not have enough food.

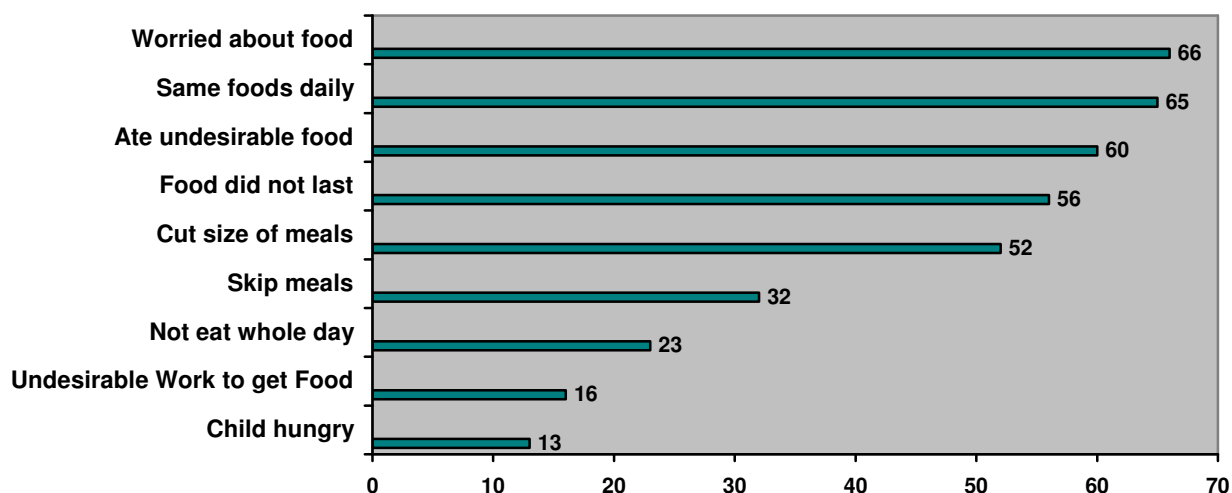
#### 2) Food Quality affected:

Again 65% or almost 2 out of 3 households (192 of 294 households) responded that they eat the same foods daily because they did not have money to buy other foods. And 60% ate undesirable / non-preferred foods.

#### 3) Food Quantity Inadequate:

Slightly more than one in two households (165 of 294 households - 56%) said that the food they had did not last, and they didn't have enough money to buy more. And one in two households (152 of 294 - 52%) reported that an adult in the household had to reduce / cut the size of their meals because they did not have enough money to buy food.

**Household Food Insecurity and Access: Percentage of affirmative responses to specific household food insecurity / access items (n = 294 households)**



**4) Food acquired through Socially Unacceptable Means:**

One question that serves as a proxy for this domain was: did you have to do any type of work that you would normally not do in order to obtain food? 16%

Food insecurity affects a large proportion of people in the urban slums of Mumbai (project area of Build). However, it is not yet visible through its physical manifestations /consequences because only 13% or 68 households reported that the respondent may have suffered actual weight loss due to lack of enough money to buy food. And only 13% (38 respondents) had child/children in their households that complained of hunger due to lack of food.

**Months of Adequate Household Food Provisioning (MAHFP)**

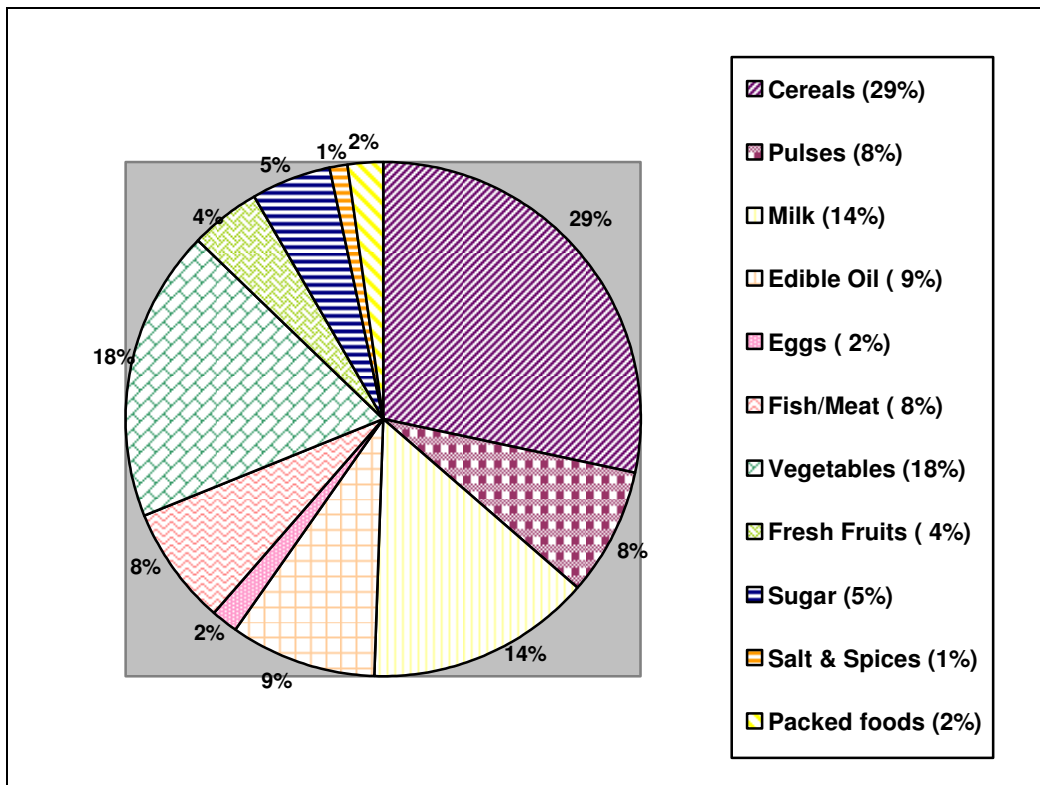
The above findings of food insecurity in various domains are further supported by the MAHFP questions which showed that 1 out of every 2 households (154 - 53%) had at least one or more months in the past year (2009) where there was inadequate food in the house. Majority of the households reported experiencing inadequate food provisioning in the months of November, 2009(35%) and December, 2009(34%). Some may attribute this to recall bias, whereby respondents remember recent events more vividly, however the finding definitely coincides with the dramatic price rise which occurred around the festival of Diwali in 2009 (Diwali is celebrated in months of October-November every year).

**Monthly Food Expenses**

In general it has been found that expense on food correlates with household income. In poor households, expense on food is one of the greater expenses; and any increase in income generally reflects in a higher food expense. Monthly food expense can be used as a proxy measure for poverty. The mean monthly household income was Rs. 5587 (EUR 90; US\$123); and the mean personal income per month was Rs. 995. The mean of the total monthly food expense of the households is Rs 2912 (EUR 47/-; US\$64/-). Thus, food expenses account for 52% of the monthly household income.

Greater portion of the monthly food budget is spent on Cereals/Grains/Bread (mean Rs 823 or EUR 13/-) and Vegetables (mean = Rs530.58 or EUR 9/-) as compared with other food items. The high expense on vegetables is mainly due to the high prices of vegetables. Essentially families are getting less quantity for more expense. The mode for expenses on food items like eggs, fresh fruits and fish/meat is 0, which reveals that many households did not spend on these nutritious food items in the last month.

**MEAN OF MONTHLY HOUSEHOLD FOOD EXPENSES**



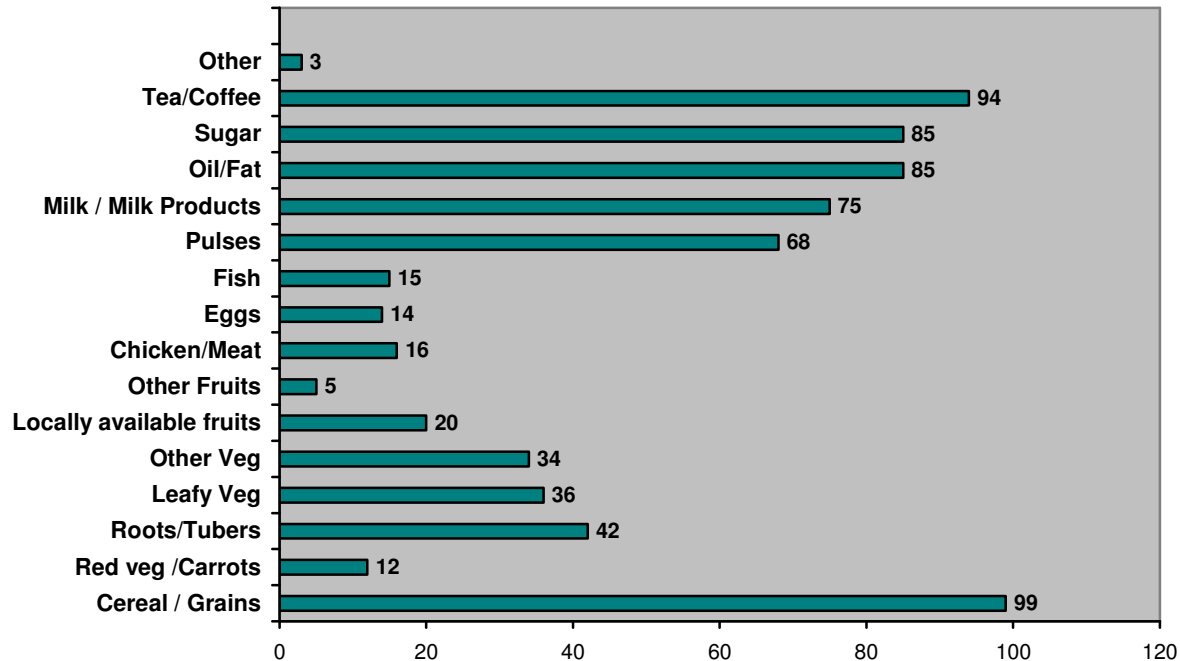
The mean per capita (per person) monthly expense on food in the household or average food expense per person per month is Rs 590.51 (EUR 9.5/- or US \$ 12). Per person PER DAY expense on food is a paltry sum of Rs 19.68 per day (EUR 0.3 per day / US \$ 0.43). The median of per person PER DAY food expense in these households is Rs 18.74 and the mode (most frequently occurring figure in the sample) is Rs 11.66. Thus, majority of urban poor households are spending EUR 0.19 or US \$ 0.25 for food every day. This is much less than the \$1 or \$1.25 per day number given by various international institutions.

Nearly 2 in 5 households were earning less than Rs 4000 and 1 in 3 earning between Rs 4000 and Rs 6000 per month. This income is inadequate for meeting the minimum daily caloric requirement as per local market prices of food.

**Household Dietary Diversity** (see chart below)

Almost all households (291 of 294) had consumed some form of cereal / grain such as Rice, Wheat chapati (bread), Bajra in 24 hours prior to the survey. The table below indicates that the second most consumed item in the households in the past 24 hours was Tea followed by Sugar, Oil, Milk/Milk products, Pulses, Roots/Tubers, leafy vegetables and then other vegetables. Thus, the mean diversity score was 7, out of a possible total of 14.

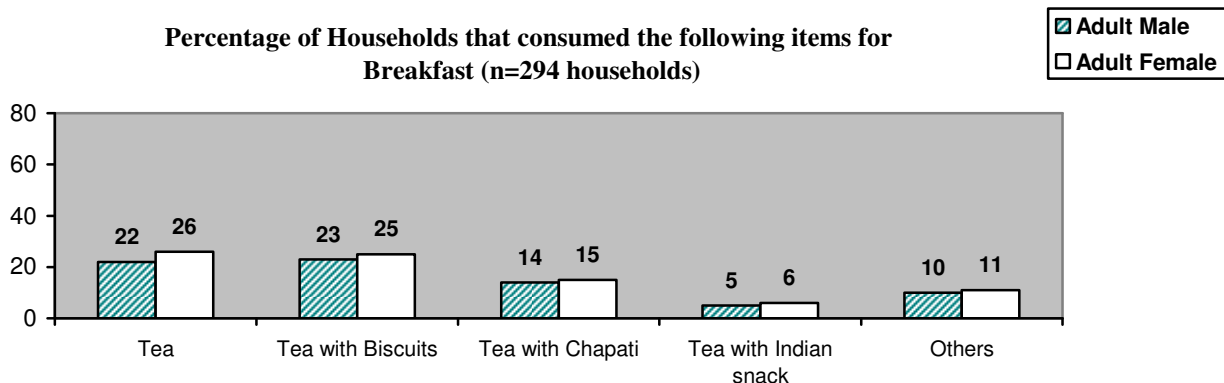
**Household Dietary Diversity:  
Percentage of households consumed defined food items in last 24 hours (n=294)**



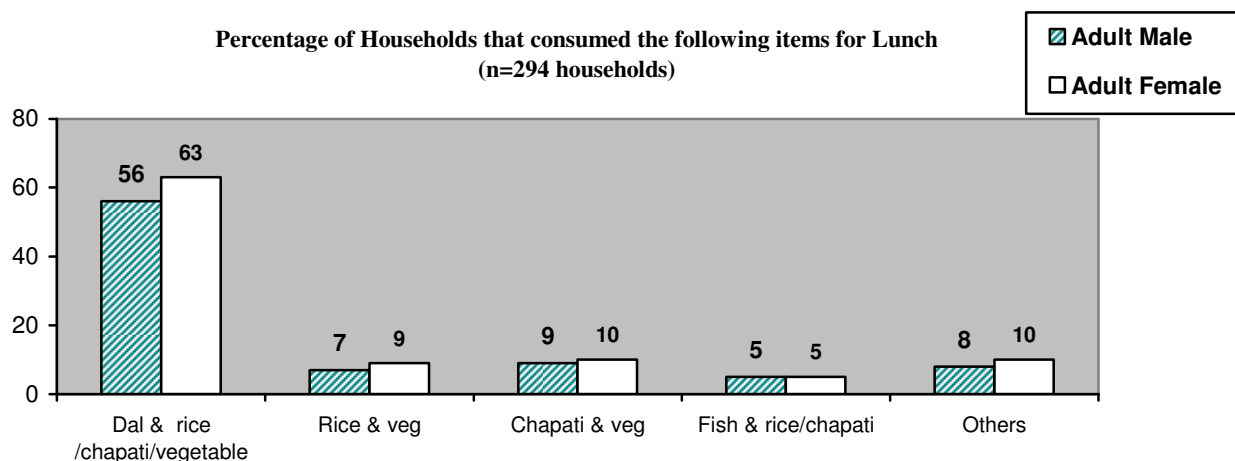
However, closer examination of the 24-hour dietary pattern reveals that the apparent diversity score of 7 could be misleading. Almost all households drink tea and preparation of Indian tea (chai) requires sugar and milk (milk powder). Thus, consuming Indian tea which supplies no nutrients as such falsely increases the dietary diversity score. Oil is also a staple item in almost every Indian meal. Pulses are often the only source of protein and almost 1/3<sup>rd</sup> of the households did not consume it in the past 24 hours. Leafy vegetables are cheaper in Mumbai compared to other vegetables and that probably explains higher use. However, comparing this to the monthly expense one finds that less than 40% of the households are consuming vegetables and in terms of monthly expense, it is SECOND to expense on grains (consumed by 99% of households) demonstrating the high prices of vegetables. The consumption of animal protein is negligible and not because families are vegetarian. They simply cannot afford it.

### **24 Hour Diet Recall**

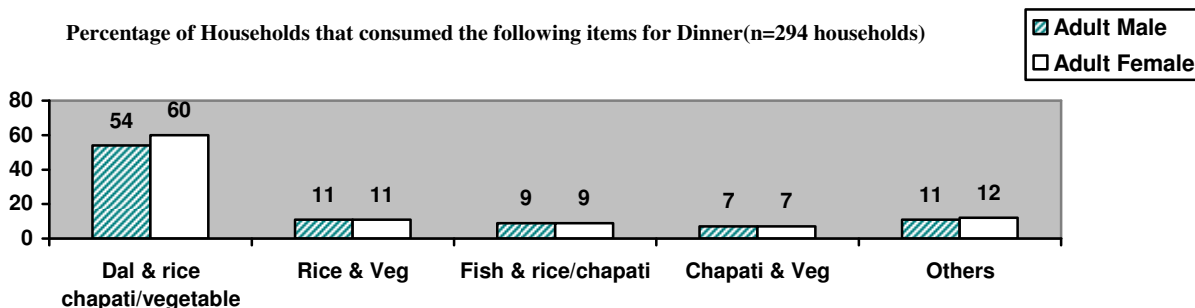
The 24-hour recall of all food intakes in household over the previous 24-hour period helps us determine the number of eating occasions in a household and also what is eaten in those times. Majority of households in the survey areas eat on an average of 3 occasions a day – breakfast, lunch and dinner; 260 households (88%) had at least one member that consumed breakfast and one can see that it is mostly an adult. The main food item consumed during breakfast is mainly TEA and in some cases tea with biscuits or tea with chapatti (Indian bread). Most children go to school without breakfast.



Similarly, 286 (97%) of the households had at least one member that consumed lunch. The main food items eaten during lunch are daal-chawal or (pulses and rice) accompanied by a vegetable or sometimes by one or two chapattis.



The third major eating occasion is dinner and all the households (at least one member) had consumed dinner. Once again “dal-chawal/rice” or daal rice with one vegetable or daal rice with vegetable and one or two chapattis are the food items consumed in the majority of households.



Interestingly tea, even consumed by itself, is considered as a meal or eating occasion because of the time of day when it is consumed. Urban poor households clearly lack dietary diversity and the actual monthly food expenses on various food items only reinforce it further.

## **Bivariate Analysis**

To determine the factors associated with food security and to find out who/which household is at greatest risk of experiencing food insecurity, we compared the means for various variables such as number of family members, years of education, household income, household income per person per month, personal income, monthly total expenses on food, food expenses per capita per month, food expenses per person per day, years of education and household dietary diversity score. The results of this bivariate analysis suggest that households where the women has low education and households with low monthly household income are most likely to be at highest risk of food insecurity. Additionally, households where the total monthly income is low and where the women's income contribution to the overall household income is higher are likely to be experiencing more food insecurity. These may be women-headed households where the woman is the major breadwinner and she is typically less educated and in a low income job. There is a definite gender bias to the food insecurity situation in urban poor households.

## **2. FINDINGS FROM FOCUS GROUPS**

Research Questions answered:

(i) to (vi); and

(vii) What are families' perceptions about poverty and food insecurity situation?

Sample Description: A total of 44 women from as many low-income households in urban slums of the three municipal wards of P North, R-South and H-East took part in the four focus groups. Ages ranged from 20 years to 65 years with a mean of 36.8 (median of 37). Average years of education was 5.82 years with a median of 7 years; of 44 participants, 39 (89%) were married and 5 (11%) were widowed. The number of children ranged from 0 to 6 with a median of 3 and mean of 2.77. Majority of the participants (35 of 44) worked in some job. Most of them were either self-employed, part-time (for e.g. clothes, jewelry assembling) or worked as domestic maids in nearby residential buildings. Only 9 out of 44 participants were housewives and did not report any personal income. The personal monthly income of other participants employed full time or part time, ranged from a minimum of Rs 250 per month in the case of a self-employed woman to Rs 6000 per month for a woman engaged in job in a private sector company. Although participants were reluctant to share data on monthly household income, we found that monthly income of household of the participants ranged from a minimum of Rs 1000 to Rs 10,000.

### **Findings:**

#### **(a) Life/Survival and Household Management**

All participants unanimously expressed great difficulty in running their households in Mumbai city, especially so in recent times due to price rise of essential commodities and price rise in the rates of electricity. Participants stated that even though there was a steep rise in food prices and cost of living, their incomes have stayed the same or decreased, only to worsen their crisis. Few participants were even vocal about their inability to arrange two meals a day at times because of the lack of money to buy enough food. One participant said,

*"I have slept without eating food for many days. I just drink water and go to sleep. My husband does temporary jobs and I'm a maid, we cannot afford to get enough food at home at times. We live on rent, how do we pay all these bills and still get food for our children?"*

When asked about their daily schedule, it was found that most of the participants and many adult members of their households spent a substantial part of their day (more than 12 hours in some cases) in



work (gainful work) and after returning from work, they completed household chores. Each one of them confirmed to having no more than 5 to 6 hours of sleep daily and eating only twice a day. Tea was a staple breakfast and some of them were even cutting down on tea due to high food costs.

### **(b) Food and Hunger Management and Approaches**

All participants expressed worry/anxiety over the issue of food security. Families felt very insecure about their next meal. Household members' daily food intake has been affected both in quantity and quality by the rise in food prices as well as unavailability of good quality grains at subsidized rates from the public distribution system. Participants found it difficult to purchase any nutritious food items like poultry, meat, fish, vegetables and fruits and relied heavily on basic food grains and pulses which clearly illustrated a lack of dietary diversity, resulting in consumption of the same foods daily. Household diets were very simple and consisted of some grains such as rice or wheat and daal (pulses). Sometimes when the family added one vegetable to the plate of food, they had to necessarily consume less daal and so they added water to the daal to increase its volume. Most participants had some tea in the morning. Very few had breakfast.

Even when essential commodities such as rice or grains were available in the PDS stores, the quality was substandard. Majority of the participants spoke about their discontent with the Public (Food) distribution system. They unanimously felt that the quality of the subsidized food grains (mostly unavailable) was extremely poor. The better quality grains at the ration shops were sold in the black market at much higher rates. Women have resorted to short term approaches to deal with this food crisis where they buy lesser amounts of food stuff or compensate one poor quality, low cost food item with a slightly higher cost item.

One participant said,

*"I buy a cheaper quality rice along with better quality daal to compensate. We even purchase lesser quantity of sugar. I add more water to the daal everyday and make it watery so that it is sufficient for the children".*

Many of the participants said that sometimes children complained about eating the same food everyday. The women found it difficult to provide or prepare different food items for their children due to the prohibitive costs. However, most of the times the women said they have managed the situation by scolding the child or in some cases explaining the household financial crisis to the children. With respect to the husband's role in the household, all the women said that husband's role was to bring in the money. They found their husbands to be generally cooperative and almost all the women said that the husband ate whatever was put in front of them.

### **(c) Financial Management and Approaches**

Two unanimous themes emerged from the discussion on financial strategies used by urban slum households. The women reported that in order to have a decent enough living in Mumbai today, every member of the household had to work and earn. That is all urban slum families had to become not only double earning but even triple earning or all-member income by default. Almost all of them said that they had to take periodic loans in order to survive. A major portion of the household income was spent on everyday expenses like food, rent, children's education and medical expenses, which leaves the participants with almost nothing to keep aside for savings or to make any investment for the future.

As household incomes did not match up to their expenses, most of the participants reported that they had taken loans. Most often from friends, as it was easily available and did not carry a rate of interest. If not friends, the participants resorted to self-help groups or local loan sharks and jewelers' shops for loans (where they had to pawn jewelry or other valuable items). But they collectively expressed a discomfort in taking loans from the bank and complained about the high-interest rate charged by jewelers or local loan

sharks. For most of the participants, Self-help groups (SHGs) were the only saving strategy; managing to save a meager amount of Rs 100 every month.

#### **(d) Single Biggest Problem**

Urban poor households' biggest problem was the lack of enough money to run/manage the household. Rise in food prices, cost of living and education has only added burdens. There was a general discontent because of the lack of guarantee of employment. As the entire monthly income is spent on daily expenses for majority of the participants, they find it difficult to deal with emergency situations which results in them taking loans; and the subsequent worry of how to repay the loans and at the same time manage the household food situation in an adequate manner

#### **(e) Best Solution**

Participants felt that the only way their crisis could be solved was by increasing their household incomes. Most of their spouses were already doing additional work shifts, but the participants felt that even they required gainful employment to support the household. Since BUILD has already been providing some employment related training, they felt that this could be strengthened and expanded to reach more people in the area. They felt that if more members of the household found work, a way could be found out of the household food crisis. Along with increase in income, and participants also felt that the current rise in food prices should be curbed by the government in order for the people to have some respite. Also, the state government should make food grains available at even more subsidized rates.

Many women felt that the solution did not lie in their local areas – meaning the power to address food inflation lay elsewhere – in the corridors of power in the state legislature or parliament. The women expressed the need for a platform that will allow them to take their voices to those in power. They needed a vehicle – or a *madhyam* (medium) - as one woman put it - that was the role they saw for agencies like BUILD.

*“We need a madhyam (medium) by which our voices can be carried to the people in power. We are willing to give time but it should have some impact.”*

### **3. QUALITATIVE STUDY OF 20 FAMILIES IN LOWEST INCOME SEGMENT**

Research question answered: (viii) what is the situation in the households in lowest income group?

Findings: The objective of this qualitative study was to explore how the poorest of the poor families (households) are dealing with or managing the crisis imposed by the recent food inflation (rapid rise in cost of essential food items). Poorest of the poor or lowest income bracket was defined as families with a total monthly household income of Rs. 4500 or less (EUR 72/- OR US \$100).

**Sample description:** 6 out of 20 families earned Rs 4500. The remaining 14 households earned less than that. The mean total monthly household income was Rs. 4065. The average family size was 5. None of the families had to pay house rent.

**Water and sanitation:** The main source of water for all households was the public tap, outside the house. The households received water at varied timings during the day. Larger families (More than 4 member families) have to borrow water from smaller families. All 20 families use the public toilet. Hand washing before meals and after toilet-they said they do but researcher is doubtful. None of them used soap during hand-washing.

**PDS/Ration:** None of them take grains from ration, either because they do not have a ration card or the quality of the food grains; they said was too bad to consume. They purchased grains from the private stores.

**Diet patterns:** All members, in all families interviewed, eat tea and toast/ bread/ biscuit. No breakfast is prepared because of lack of time and thus dry snack turns out cheaper. For lunch, daal is cooked daily (Mostly tur or moong). Lunch consists of rice or chapatti and an occasional vegetable (the vegetable chosen depends entirely on the prices). Most children do not consume anything between lunch and dinner. Even the parents just drink tea in the evening. Dinner again is similar to lunch. Fruits eaten are only apple (the cheap variety) and banana and in most families very rarely. When asked as to how often they eat fruits, two mothers actually said we don't "waste" money. The quality of food being eaten has gone down but they are not starving. Some families/mothers said that they manage with whatever is available even onion and chapatti at times.

Basically, the lowest income group families are just eating 2 meals a day. In families with income of less than Rs 4000 the expense on food/electricity bills/cable bill and others exceeds Rs. 4000 and they manage on LOANS. Thus, living on loans has become a way of life. For these lowest income group families, it's about just dealing with hunger or getting their next meal and they are not even thinking about the nutritional value or health aspects of the food they are eating. Health is definitely not a concern; hunger is.

#### **4. FOOD STORE SURVEY**

Research Question: (ix) What is the "food availability" situation in the project area?

Assessing availability of food is as important as measuring problems in access to food for determining food insecurity among urban poor. It is the interplay between availability and affordability of food items that this food store study tries to explore. The data collected through this survey provides details on the number and type of food stores and prices of food items in 4 selected chawls in the project area in the month of January, 2010.

Almost all essential food items, vegetables, and fruits are adequately available across the research / project area of BUILD in various private and local stores. There is no dearth of food and vegetable stores and handcarts. The lowest number of stores in one of the project areas was 40; which means other 3 areas had more than 40 food stores. We found 9 different types of food stores in each of the 4 surveyed areas such as: ration shops, local grocery (kirana) stores, wholesale shops, vegetable shops, fruit shops, vegetable/fruit handcarts, meat-poultry shops, fish shops and other shops (snacks). There were more than 20 general/kirana stores; average of 3 ration shops; and more than 10 vegetable shops across each of the 4 surveyed chawls.

##### **Public Distribution System (PDS - Ration shop) food items across the 4 chawls:**

The price of the ration food items remain consistent throughout the 4 chawls, however the problem lies in the availability of the items particularly Rice, wheat and Daal, which continues to remain uncertain.

##### **Essential Food items from local grocery store (kirana shop) across the 4 chawls:**

Basic food grains like rice, wheat and pulses (daal) are twice as expensive as those available from the Ration stores. Majority of the remaining food items are priced the same across the kirana stores in the 4 chawls. An interesting finding is that all the Kirana stores (that were interviewed) across the 4 chawls, sold daily consumption items like tea, coffee and biscuits in mini- size packets: Tea & Coffee (2 gram sachets priced at Rs. 1) & Biscuits (75 grams packets priced at Rs. 5), which made it affordable for the households.

**Vegetables and Fruits (from vegetable shops & carts across the 4 chawls):**

Indian household menus often show the daily use of onions, tomatoes and potatoes in gravies and other food preparations. The average costs of these basic vegetables are Rs. 20 (onions), Rs. 19(potatoes) and Rs. 27(tomatoes) across the 4 chawls. None of the vegetables mentioned in the table, cost below Rs. 20 per kilogram. Majority of the locally available fruits like apples, bananas, oranges costs Rs. 35-50 per dozen on an average across the 4 chawls.

**Dairy/Poultry/Meat (from shops across the 4 chawls):**

Dairy, Poultry prices stand constant across the 4 chawls; meat (mutton) however was available at almost half the price i.e Rs. 120, in Wadaripada chawl(R/South ward) as compared with the other 3 chawls. Only a selected few types of fish were available across the 4 chawls. On probing the fish vendors further, the researcher was told that majority of the customers, purchased cheaper varieties of fish in smaller quantities.

**Comparison of Grocery Food items - A Kirana store & A supermarket (food bazaar) in R/South ward:**

When we compared the grocery food items available at the Kirana/Local Grocery store and the Supermarket, both located in the same area i.e Wadaripada (R-South ward), Kandivali East, we found that the certain Pulses like Moong Daal, Chana Daal, Gram Flour and most importantly Oil and Sugar available at the Supermarket were comparatively cheaper than those available at the Kirana/General Store.

Oil for instance was priced at Rs. 44 per litre at the supermarket as compared to the Kirana store that sold oil at the rate of Rs. 60 per litre. Sugar was priced at Rs. 41 per kg at the supermarket as compared to the Kirana store that sold sugar at the rate of Rs. 44 per kg. Even the cost of basic vegetables like onions, potatoes and tomatoes available at the Supermarket, were found to be reasonably lower than those available at the local vegetable shop/cart in the same area.

This intriguing finding gives rise to many questions, the most important one being; that if the prices of certain basic food items are lower at the supermarket as compared with the local grocery stores, then why aren't the low-income households purchasing these items from the Supermarket? Although residents said that language or the culture was a barrier for entering the store (perceived as being for a different class), it was also the fact that they probably cannot afford to buy in bulk quantities as sold in supermarkets because of two problems: of storage in urban slum household and of the immediately availability of large amounts of cash. Unlike the local kirana store which stocks small sachets packets sold by multinationals, supermarkets do not generally allow purchase of food items in extremely small quantities. Most importantly, the local kirana stores, even though high priced, allow these households to buy food items in small amounts and most importantly on credit.

In the context of contemporary urban India, especially Mumbai, adequate supply of food to the retail stores or availability in general grocery (kirana) stores do not necessarily translate into universal access to this food for every household. The main constraint that prevents general availability from getting converted into real access is economic – or poverty – the lack of money to buy this available food. In fact, food is available but people do not have the required income to buy that food.

With the mean of the total monthly food expenses of the 294 households across the 4 selected chawls (interviewed as part of the related food Security Research study), being Rs. 2912.49, one can imagine the amount of cuts in the dietary intake, that majority of these households have to make in this time of rising

food prices. Food is available but the price of this available food is so high that poor families are unable to purchase the food. Thus, access rather than availability of food becomes a critical factor for the urban poor.

## 5. COST OF OBTAINING DAILY CALORIE REQUIREMENTS

**Research Question Answered:** (x) what is the cost of obtaining the minimum daily calories?

### Findings:

We found that in order to buy the appropriate amount (grams, liters, numbers) of nutrient food items that would supply the minimum required calories of 2100, the person living in the urban slums would have to spend anywhere between Rs 25 (EUR 0.40) to Rs 30 (EUR 0.48).

Our monthly food expense data reveals that half of these households are spending less than Rs 18 (mean per capita per day expense on food in urban poor households), and researchers could not buy the required calories within that amount. At Rs 20 it is possible to have 3 meals but they do not meet the calorie requirement. One could surmise urban households are probably eating half the required amount of food everyday or compromising on various nutrients by consuming a non-diverse diet. This is bound to affect the physiology and the physical consequences are likely to manifest soon in the form of an immune compromised, disease-ridden population. The danger of obtaining excessive calories through cheaper carbohydrates is probably already manifesting in the form of chronic diseases.

Food lists with a combination of food items, which can be purchased at the cost of Rs. 25 and 30 per person per day are provided below.

<i>Sr. No</i>	<i>List 1( Rs.25 per person)</i>	<i>Quantity</i>	<i>Calories per serving</i>	<i>Cost</i>
1	Milk	500ml	100	12
2	Parle G/Marie (Biscuits / Cookies)	200gm	100	10
3	Sugar/Jaggery	250gm	200	9
4	Peanuts	300gm	300	8
5	Rice	500gm	345	10
6	Bengal gram	300gm	180	8
7	Green leafy vegetables	1 bunch	30	8
8	Amla	4	-	3
9	Oil	100 gm	200	15
10	Sweet Potato	500gm	170	8
11	Jowar	300gm	300	4
12	Daal Masur	300gm	210	15
13	Banana	5	100	10
14	Miscellaneous (onion, spice etc)			5
For 5 persons		Total	2235	125

<i>Sr.no</i>	<i>List 2( Rs.30 per person)</i>	<i>Quantity</i>	<i>Calories per serving</i>	<i>Cost</i>
1	Milk	500ml	100	12
2	Nachni/Puffed rice	300gm	300	5
3	Sugar	250gm	200	9
4	Peanuts	200gm	200	8
5	Rice	500gm	345	10
6	Chana Dal	300gm	200	10
7	Spinach/Fenugreek/	1 bunch	30	8
8	Carrot	250gms	30	5
9	Oil	50gm	100	10
10	Pumpkin/cabbage	500	30	7
11	Wheat	300gm	200	6
12	Tofu	200gm	200	24
13	Chiku	5 pieces	100	12
14	Jaggery	200gm	150	6
15	Parle G/Marie biscuits / cookies	200gm	100	10
16	Miscellaneous (onion, spice etc)			8
For 5 persons		Total	2385	150

## 6. GOVERNMENT FOOD SECURITY SCHEMES

Research Questions Answered:

- xi) What are current governmental programs to address food problem faced by poor households and user's perceptions about government schemes?
- xii) What are currently available government programs / schemes for poverty alleviation?

**FINDINGS:** This qualitative study focuses on the functioning of the three most important government food security schemes viz. Public Distribution system (PDS), Integrated Child Development Scheme (ICDS) and the Midday meal scheme; in the project area of BUILD.

Public Distribution System (PDS), with its focus on distribution of food grains in urban scarcity areas, had emanated from the critical food shortages of 1960s. It facilitates the supply of food grains to the poor at a subsidized price through fair price shops (ration shops) across the country.

Integrated Child Development Scheme launched on 2<sup>nd</sup> October 1975, seeks to address the issue of child malnourishment by providing young children with an integrated package of services, including supplementary nutrition, health care and pre-school education. Since the needs of a young child cannot be addressed in isolation from those of his or her mother, the program also extends to adolescent girls, pregnant women and nursing mothers. ICDS services are provided through a vast network of ICDS centers, better known as "Anganwadis".

Mid-day Meals: The National Program of Nutritional Support to Primary Education (NP-NSPE) was launched as a Centrally Sponsored Scheme on 15th August 1995 with a view to enhancing enrollment, retention and attendance and simultaneously improving nutritional levels among children. As per the program, all school-going students were given a free 'dry ration' (typically three kg of rice) every month to carry home. The mid day meal in its present form was initiated in 2004. According to the scheme every child in a government or government-assisted primary school or in Education Guarantee Scheme (EGS) and Alternative and Innovative Education (AIE) centers is entitled to a nutritious, cooked midday meal with a minimum content of 300 calories and 8-12 grams of protein each day of school for a minimum of 200 days.

### **(i) Public Distribution Scheme (PDS)**

PDS is a joint collaboration of central and state governments. Thus, responsibilities of work under this system are shared by both parties. The Food Corporation of India (central government) procures and stores food grains at FCI godowns in various districts/villages in each state (for instance, the FCI godown in Mumbai is located at Borivali). Food grains are then tested for nutrition and safety at the FCI godowns after which they are transported to the state government godowns. The food grains then have to pass through state officials followed by wholesalers who then distribute it to various ration shops in the city.

The entire PDS process described above may seem organized and full proof. How can we then explain its current ineffectiveness and inadequate implementation? Corruption not just at the level of the ration shops but also at higher official levels is one of the foremost reasons for the ineffectiveness of the PDS. The monitoring mechanism is almost absent and the lack of transparency in the system makes monitoring extremely difficult. The process of identification of the beneficiaries of important schemes like 'Antyodaya' or 'Annapurna' is often faulty and restricted to a target number which excludes various needy and marginalized people, who are the rightful claimants of the schemes. Apart from the issues in getting the ration card and regarding exclusion, the beneficiaries in the project area of BUILD; face various other problems when they try to claim their entitled grains from the ration shops. Some of the problems are summarized below.

Experiences of respondents with the Public Distribution System could be described as frustrating at best. Most respondents complained about the substandard quality of rice distributed through the ration shops; 54% rated the products as poor, while 24% rated them as average or fair. Nearly 57% said that products were always unavailable at rations shops and 51% rated the quality of service as poor and 60% were not satisfied at all with the service or unsure. Not a single household gave the quality of ration food items an 'Excellent' rating. About 172 households (59%) reported their last visit to the ration shop as being completely unsatisfactory. When probed about details of ration related problems that the households faced, majority of them listed substandard quality of ration food items, perennial unavailability of food grains and poor service as being the recurrent problems they face with the PDS.

Since most of the beneficiaries of these schemes are from the most marginalized and poor groups, they can only afford to buy their ration in smaller installments depending on the amount of money available with them. Quite often the ration shops owners do not allow the beneficiaries to do so and insist that they buy the full quota at one time; thus beneficiaries have to forgo their rations. Many shop owners also do not follow the guideline of allowing the beneficiaries to purchase their quota in the following month, if they can not afford to purchase in the same month. They say that the quota has 'lapsed' and the beneficiaries are denied the grains to which they have a right. In these ways the ration shop owner makes it difficult for beneficiaries to purchase their full quota of grains, leaving a lot of unsold food stock, which eventually is sold in the open market. The findings of this study very clearly indicates the urgent need to revamp the PDS system at all levels in order for it to be more effective and serve its claimed purpose.

### **(ii) Integrated Child Development Scheme (ICDS)**

An anganwadi is supposed to be a physical structure where very young children come for food, play and preprimary education, the centre therefore must meet certain basic infrastructural facilities requirement. However it was observed that most of the anganwadis lacked basic facilities like drinking water; Chatais (cane mats to sit on) which forced the children to sit on the bare floor; the children were not even provided stationary like books and pencils. In one anganwadi, it was also observed that there was only one toy for 40 children which often led to the children fighting over it.

Focused group discussions with the parents of the beneficiaries from the project area of BUILD revealed that even though the presence of the ICDS was essential in the community; the quality of the services provided at the Anganwadi centers (AWC) was often substandard. The Anganwadi centers functioned from 10 in the morning to 2 in the afternoon. Barring Sundays and public holidays, the AWC's were open 6 days a week. When probed in detail about the utilization and satisfaction of the services provided at the AWC, respondents complained of certain problems which are summarized below.

Respondents expressed that the food to be served to the children often arrived as early as 7 in the morning even though it has to be served around 12 to 1 in the afternoon. As a result, the food often got cold and soggy and lacked taste. The menu was rigid with three set items distributed without any change, which included Khichdi (preparation of rice and daal), Boiled chana and Laapsi (sweet wheat preparation). Respondents did not mind their children being served the same food daily but demanded for better quality food, as the food served was often flavourless, lacked taste and on some occasions were even found to be inedible. The quantity of the dry snacks provided was also less and the anganwadi workers had to often adjust and distribute small quantities of these snacks among the children.

On being asked if they had ever complained about the poor quality of food served, the respondents confirmed to have made several complaints to the anganwadi worker but were more than often greeted with disappointment. In one case however, the matter was taken up by an anganwadi worker who along with her zonal senior (Mukhya Anganwadi Sevika) agitatedly discussed the issue with the Self-help group that was responsible for preparing the meals and subsequently reached a mutual agreement after which that particular AWC started receiving better quality food. This leads us to infer that the motivation of the anganwadi workers also plays an important role in the effective implementation of the scheme.

Discussions also revealed that the educational activities conducted at the AWC's were limited; with an absence of any creative learning activities and during the play time, children were often left on their own, with the mere supervision of the anganwadi worker and a helper. As far as immunization is concerned, the AWC's conducted regular vaccine programs and growth monitoring was restricted to occasional check of weight and height of the children. There was however no mention of Nutrition education activities for the community.

Anganwadi workers of the project area also shared their concerns over not being paid regularly. They mentioned about the times when they were not paid for months together. This not only affects their personal financial state but also lowers their motivation to serve the beneficiaries efficiently. Thus lack of proper implementation and monitoring with little access to recourse has only lead to disappointment and poor expectations of the beneficiaries most of whom come from marginalized sections of the society.

### **(iii) Mid Day Meal**

Focused group discussions with the parents of the beneficiaries of the Mid-day meal (MDM) scheme revealed that earlier children were provided with 2 kgs of dry food grains every month. Since the last 4 years however, the children are getting cooked meals at school. These services are provided 6 days a week except for Sundays and public holidays. Respondents reported the quality of cooked meals as substandard. Children often complained about the poor quality of the food and at times even refused to eat the food. Every morning, primary school children are given glucose biscuits with 50 ml milk. Respondents however mentioned that their children have fallen sick after consuming the milk.

Cooked meals provided for primary and secondary school children are common. The menu provided is fixed with 4 food items i.e. Khichdi (food made of a mix of rice and daal), Sheera (sweet preparation made of semolina/rava), Laapsi (sweet wheat preparation) and Dal rice. Respondents complained that



these meals lacked variety and were poor in taste. Children have often complained of finding stones in their meals. As a result, even though the children are provided with food, many refuse to eat it.

When asked if children looked forward to going to school because of the midday meal, majority of the respondents replied in the negative. The parents shared their experiences of complaining against the poor quality of the food. They unanimously expressed that the school authorities did not pay heed to their complaints. Some Municipal school teachers even went to the extent of telling the parents that, “We taste the food before giving it to your children. How then can you complain of the food being tasteless and of poor quality? Why can't you all stay happy with what you'll get?”

However one parent said that her child has to eat whatever he gets, even if it tastes bad or has stones mixed in it, as the family can afford to prepare only one meal a day at home. This statement suggests that such a scheme is important to many low-income households; however its improper implementation forces them to settle for substandard food since complaints have not led to any improvements.

Parents recommended that they should be involved in the implementation of this scheme; they could play a role in monitoring the process from preparation of the meals (by the self-help groups) to the distribution of the food. Only when strict steps such as these are taken, will such a vital scheme be able to reach out to its deserving claimants thus fulfilling its objectives on a wide scale.

#### **(iv) URBAN POVERTY ALLEVIATION SCHEMES**

Poverty reduction is an important goal of the Indian urban policy. The gradually increasing number of government-sponsored Urban Poverty Alleviation Initiatives (UPAIs) being introduced year after year may indicate that urban poverty has become an important issue for the policy-maker. Since the year 1952, the central government has introduced more than 45 Urban Poverty Alleviation Schemes. The Center's UPAIs can be categorized into three key areas: Housing, Welfare and Credit & Employment.

The recent most prominent UPAI is the Swarna Jayanti Shahari Rozgar Yojana (SJSRY) which is a unified centrally sponsored scheme launched in 1997 in lieu of the erstwhile urban poverty alleviation programmes, namely the Nehru Rozgar Yojana (NRY), Prime Minister's Integrated Urban Poverty Eradication Programme (PMIUPEP) and Urban Basic Services for the Poor (UBSP). This scheme mainly has five components: (i) Urban Self Employment Programme (USEP); (ii).Urban Women Self-help Programme (UWSP); (iii).Skill Training for Employment Promotion amongst Urban Poor (STEP-UP); (iv).Urban Wage Employment Programme (UWEP) and (v). Urban Community Development Network (UCDN).

BUILD has been actively involved in organizing the communities in its project area under the Urban Poverty Alleviation Schemes; particularly the SJSRY. Under this scheme, it has successfully managed to organize and support 247 Self-help groups (SHG), 33 Income generation groups (IGG) and 219 neighbourhood groups (NHG) in its project area of three municipal wards in Northwestern Mumbai. As part of the IGG initiative, women's groups have been provided training in various micro business skills namely Phenyl, Agarbatti, Masala (spices) and candle making; Catering and Food products retailing to name a few. These IGG's have commenced with immense enthusiasm and participation from the women and some IGG's have been successful as well. But the real challenge is continuing and maintaining these micro businesses as there lay many operational difficulties which these women are not equipped to deal with. For instance, IGG's have only been giving production related training as part of the scheme, however they lack important related skills like marketing and business management. As a result of which they make their product sales within the community itself and are not equipped to go outside their area, which in turn restricts their scope for profit.

Another operational difficulty is the space shortage for production and storage, which the IGG's have to arrange on their own. Considering that the women who belong to these groups live in cramped spaces in urban slums, they have highly inadequate and unhygienic spaces for production and storage. During monsoon months, IGG's have reported losses due to flooding of existing spaces and absence of alternative, dry storage space. Lack of adequate space restricts the growth of these ventures. The government has to pay adequate attention to the complexities of urban poverty while planning schemes and most importantly allow sufficient flexibility to modify the programme to suit the needs of the beneficiaries.

## **E. DISCUSSION/CONCLUSIONS**

Food insecurity has become a way of life for urban poor households in Mumbai. Two-thirds of the households were worried about food and slightly greater than 50% reported inadequate foods in the house for at least one or more months in year 2009. If this is not enough stress, then 192 households, once again nearly two out of three households ate the same foods daily because they did not have money to buy other foods. In 152 households (52%) or one in two households, some adult cut the size of their meals because of less money; in 165 households (56%) the food they had did not last, and they didn't have enough money to buy more.

The daily diet intake lacks variety, fiber, and nutritious food items, in other words there is a persistent lack of dietary diversity. Households are consuming only daal (pulses), rice, chapatti (bread) with or without a vegetable. Urban poor are eating same foods daily, in lesser quantity; working more, sleeping less, and what they earn is not enough to satisfy their caloric requirements. This is not an acute famine or starvation situation, rather chronic food insecurity that may cause under-nutrition or malnutrition and various other acute and chronic diseases due to compromised immunity and high stress. The body is not getting enough food, enough rest and is overworked.

Earlier studies in food insecurity had noted an orderliness or pattern to the food insecurity response. When households' livelihoods were threatened or constrained, they first experienced worry about where they would obtain sufficient food and then attempted different strategies to augment food supply. If the condition continued, they compromised the quality of food consumed by the household. Women were likely to sacrifice the quantity of the food they consumed, whereas children's food quantity and eating patterns were disrupted only under very severe circumstances. Our study in Mumbai found a similar pattern. Although, two-thirds of households and greater than half compromised on food quality and meal quantity (or number) respectively, only 1 in 10 said that a child had gone to bed hungry. Although food insecurity looms large over the urban poor, it may not be physically visible because only 13% or 68 households reported that the respondent may have suffered actual weight loss due to lack of money to buy food..

Food is available but the price of this available food is so high that poor families are unable to purchase the food. Thus, access rather than availability of food becomes a critical factor for assuring food security of the urban poor. Before the early 1980s, food availability was considered the limiting factor in achieving food security in developing countries. However, Amartya Sen's studies and publications on entitlement theory, along with the global food crisis of the 1970s shifted policy-makers' attention to the importance of sustained household-level food access. In the context of the urban poor in Mumbai, adequate supply of food to and availability in local markets/ general grocery (kirana) stores does not necessarily translate into universal access for every household. The main constraint that prevents availability from translating into real access is affordability. Thus, the root cause is economic –the lack of money / income to buy this available food. Food is available but the price of this available food is so high that poor families are unable to purchase the food.

The amount of money required to obtain the minimum daily caloric requirement at the local shop is anywhere between Rs. 25 and Rs. 30. This would mean anywhere between Rs 720/- to Rs 900 per person per month. However, the average per person per month expense on food in the study households is Rs 590.51 (US \$ 12). Thus there is a shortfall of Rs 300/- if one considers the upper value of Rs 900/- as the amount required for a healthy diet per month per person. That means that urban households are expending only 2/3rds of the amount actually required. If families are spending only 2/3<sup>rd</sup>, are they consuming only 2/3<sup>rd</sup> of what they are supposed to be consuming. If one examines the research framework, that means the daily calorie intake is inadequate. And this is happening everyday. Imagine the stress inside the body and how the physical and social consequences of this chronic lack of food will manifest soon?

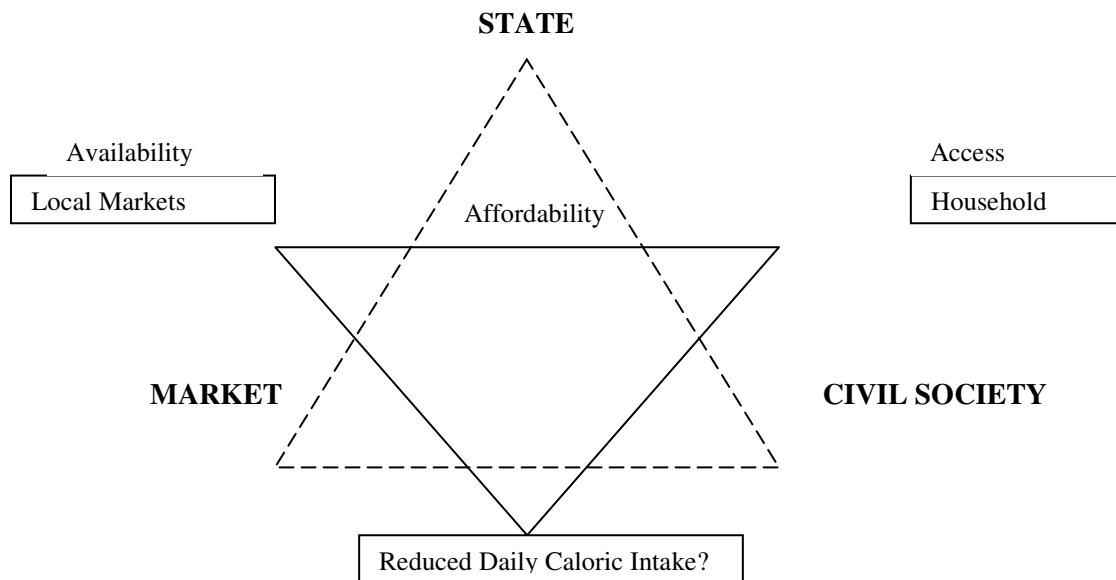
The qualitative study of the 20 lowest income group families suggests that for them it's about just dealing with hunger or getting their next meal and they are not even thinking about the nutritional value or health aspects of the food they are simply filling their stomachs. Health is definitely not a concern; hunger is the only thing on their minds when they talk food.

For low income households, the Public Distribution System (PDS-Ration Shops) is the safety net for food-related problems. However, PDS seems to have added to their misery. When asked about problems faced with PDS, majority listed sub-standard quality, perennial unavailability of food grains, and poor service. Families either have to buy subsidized grains of poor quality from the PDS shops which lack taste (maybe nutrition even), or buy better quality grains at a higher cost from local grocery stores at the cost of sacrificing consumption of other food items. Majority choose the latter even if it means spending more and entering a vicious cycle of debt and poverty.

Even though the presence of the ICDS and Midday Meal scheme is considered essential in the community; the quality of the services, particularly the quality of food provided to children, was often substandard and children refuse to eat the food. There is limited or, one can say, negligible access to recourse with respect to governmental food programs and schemes.

BUILD has been organizing communities in its project area to protest and increase access to recourse for the problems of PDS and other governmental food schemes, as well working on income-generation under the Urban Poverty Alleviation Schemes; particularly the SJSRY. BUILD has organized 247 Self-help groups (SHG), 33 Income generation groups (IGG) and 219 neighbourhood groups (NHG) in its project area of three municipal wards in Northwestern Mumbai. However the real challenges that face these groups is continuing and maintaining these micro businesses as there are many operational difficulties which these women are not equipped to deal with. Additionally, there is the problem of community members devoting time to social and community organizing protests. Every day spent in complaining or protesting means loss of a day's wages and that much less food to eat at home.

If one adds to the research framework, one can see that actions are needed at all levels and in all three spheres of a modern society – State, Market, and Civil Society. Concerted actions will lead to the best results along with critical collaborations between various actors from the three different spheres.



### **DARK SHADOW OF STATE INACTION**

If the State does not act, then the vulnerable groups, the poor will continue to see a decrease in their daily caloric intake. They will remain the dark, emaciated side (the ugly shadow) of a so-called emerging economy. Can an emerging economy afford to keep certain groups lagging behind? Or is this the only model of development open to countries like India?

What is the solution that participants think will work best?

Participants voiced a strong desire to increase their incomes by taking up additional work. However, it seems that they are already fully stretched with respect to time. They are already working extra hours in a day. None of them argued for a rise in minimum wages. Although all of them expressed frustration with the lack of resources to adequately provide for their family as well as the ineffectiveness of the government to reduce their misery and very limited access to recourse in this democracy, very few thought that they could actually do something with respect to the issue of food inflation. They felt that this situation was outside their sphere of control. The women said they desperately need a platform – a medium or channel – that will take their voices to those in power and lobby on behalf of the poor household in these times of unprecedented economic growth for the country. It is the best of times (according to our government); and it is the worst of times (according to our urban poor). The Tale of Two Indias!!! Which story (of India) shall be told in history depends on whose voice we hear?

## REFERENCES

- Anderson, S.A. The 1990 Life Sciences Research Office (LSRO) Report on Nutritional Assessment defined terms associated with food access. Core indicators of nutritional state for difficult to sample populations. *Journal of Nutrition*. 102:1559-1660, (1990)
- Life Sciences Research Office, Federation of American Societies of Experimental Biology. Core indicators of nutritional state for difficult-to-sample populations. *J Nutr*. 1990;120:1559-99.
- Barrett, Christopher B. and Erin C. Lentz. Food Insecurity. Cornell University, Chapter for the *International Studies Compendium Project*, Robert A. Denmark et al., Editors Wiley-Blackwell Publishing, forthcoming June 2009 final version (Accessed Feb 5, 2010 at: [http://aem.cornell.edu/faculty\\_sites/cbb2/papers/Barrett,%20Lentz\\_Food%20Insecurity\\_June%202009%20final%20version.pdf](http://aem.cornell.edu/faculty_sites/cbb2/papers/Barrett,%20Lentz_Food%20Insecurity_June%202009%20final%20version.pdf))
- Bennett S, Woods T, Liyanage WM, Smith DL. 1991. A simplified general method for cluster-sample surveys of health in developing countries. *World Health Stat. Q.* 44(3):98-106
- Coates, Jennifer, Edward Frongillo, Robert Houser, Beatrice Rogers, Patrick Webb, and Park Wilde. "The Experience of Household Food Insecurity Across Cultures: What Have Measures Been Missing?" *Journal of Nutrition*, 2005.
- Coates, Jennifer, Patrick Webb, and Robert Houser. "Measuring Food Insecurity: Going Beyond Indicators of Income and Anthropometry." Washington, D.C: Food and Nutrition Technical Assistance Project, Academy for Educational Development, 2003.
- Eisinger P. Towards an end to hunger in America. Washington DC: Brookings Institution; 1998.
- FAO. Rome declaration on world food security, world food summit. Rome: Food and Agriculture Organization; 1996.
- Frerichs RR, Shaheen MA. Small-community-based surveys. *Annu Rev Public Health* 22, 231-47, 2001.
- Holben, David. The concept and definition of hunger and its relationship to food insecurity. Paper, 2005. (Accessed Feb 1, 2010; [http://www7.nationalacademies.org/cnstat/Concept\\_and\\_Definition\\_of\\_Hunger\\_Paper.pdf](http://www7.nationalacademies.org/cnstat/Concept_and_Definition_of_Hunger_Paper.pdf))
- MacIntyre K. Rapid assessment and sample surveys: trade-offs in precision and cost. *Health Policy Plan*. 14(4):363-73, 1999.
- Melgar-Quinonez Hugo R., Ana C. Zubieta, Barbara MKNelly, Anastase Nteziyaremye, Maria Filipinas D. Gerardo, and Christopher Dunford. Household Food Insecurity and Food Expenditure in Bolivia, Burkina Faso, and the Philippines. *Journal of Nutrition*, 2006, 1431S-1437S.
- Milligan Paul, Alpha Njie and Steve Bennett. Comparison of two cluster sampling methods for health surveys in developing countries. *International Journal of Epidemiology* 2004;33:469-476
- National Academies of Science (NAS). Panel to Review U.S Department of Agriculture's Measurement of Food Insecurity and Hunger, National Research Council. Food Insecurity and Hunger in the United States: An Assessment of the Measure. 2006 <http://www.nap.edu/catalog/11578.html>
- North Carolina Center for Public Health Preparedness in cooperation with North Carolina Public Health Regional Surveillance Team 5. Two-Stage Cluster Sampling: General Guidance for Use in Public Health Assessments.

Accessed Feb 1, 2010: <http://nccphp.sph.unc.edu/PHRST5>

Radimer KL, Olson CM, Campbell CC. Development of indicators to assess hunger. *J Nutr*. 1990;120:1544–8.

Radimer KL, Olson CM, Greene JC, Campbell CC, Habicht JP. Understanding hunger and developing indicators to assess it in women and children. *J Nutr Educ*. 1992;24:S36–44.

Sen Amartya. *Poverty and famines: An essay on entitlement and deprivation*. Oxford: Clarendon Press; 1981.

Webb, P., Coates, J., Frongillo, E.A., Rogers, B.L., Swingdale, A., & Bilinsky P. Measuring Household Food Insecurity: Why It's So Important and Yet So Difficult to Do. *Journal of Nutrition* 136 (S1), 1404S-1408S. (2006)

Wehler C, Scott R, Anderson J. The community childhood hunger identification project: A model of domestic hunger–demonstration project in Seattle, Washington. *J Nutr Educ*. 1992;24:29S–35S.

#### Developing Country Experiences

de Waal A. *Famine that kills: Darfur, Sudan, 1984–1985*. Oxford: Clarendon Press; 1989.

Corbett J. Famine and household coping strategies. *World Dev*. 1988;16:1099–112.

Longhurst R. Household food strategies in response to seasonality and famine. *IDS Bull*. 1986;17:67–70.

Babu SC, Pinstrip-Andersen P. Food security and nutrition monitoring: A conceptual framework, issues and challenges. *Food Pol*. 1994;19:218–33.

#### Instrument Resources from FANTA – Food and Nutrition Technical Assistance (USAID)

Swindale, Anne and Punam Ohri-Vachaspati *Measuring Household Food Consumption: A Technical Guide*. Food and Nutrition Technical Assistance (FANTA) Project, Academy for Educational Development, Washington D.C., 2005

Coates, Jennifer, Anne Swindale and Paula Bilinsky. *Household Food Insecurity Access Scale (HFIAS) for Measurement of Household Food Access: Indicator Guide (v. 3)*. Washington, D.C.: Food and Nutrition Technical Assistance Project, Academy for Educational Development, August 2007.

Bilinsky, Paula and Anne Swindale. *Months of Adequate Household Food Provisioning (MAHFP) for Measurement of Household Food Access: Indicator Guide*. Washington, D.C.: Food and Nutrition Technical Assistance Project, Academy for Educational Development, 2007.