Research for the Sustainable Development of the Megacities of Tomorrow - Energy and Climate efficient Structures in Urban Growth Centres

Hyderabad as a Megacity of Tomorrow: Climate and Energy in a Complex Transition towards Sustainable Hyderabad – Mitigation and Adaptation Strategies by Changing Institutions, Governance Structures, Lifestyles and Consumption Patterns

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DOES HUNGER RETURN BACK TO URBAN INDIA?

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Does Hunger Return back to Urban India?

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Abstract

The prices or consumer goods, especially food items have increased considerably since 2007 and thus it gets more and more difficult for members of the urban low-income groups to make ends meet. This case study investigates into the food security and health situation of urban low-income groups in two localities in Hyderabad and evaluates the coping and adaptation strategies the households use to manage their food supply in the context of rising prices. The main question of this study asks if hunger or malnutrition are returning into the urban areas due to the rising prizes. Household finances based on income and expenditure patterns are evaluated and combined with an assessment of the availability, accessibility and utilization of different food items as well as schemes of poverty alleviation. Government schemes and actions aimed at poverty alleviation or nutritional assistance often fail to reach the poor properly and thus the low-income groups are often left alone to deal with their problems. Malnutrition, especially child malnutrition occurs frequently and most households are not able to provide for a balanced and sufficient nutritional supply, especially proteins and vitamins are often missing. The awareness on the relationship between health and nutrition as well as knowledge about sustainable household economics is often lacking and leads to expenditure patterns which aggravate the financial situation. An interwoven circle of lacking income, unhealthy living conditions, insufficient knowledge and neglect by the concerned government institutions leads to high rates of malnutrition in urban areas which are aggravated by the economic down-turn since 2007 but not caused by it.

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Abbreviations

AAY	Antyodaya Anna Yojana
APL	Above Poverty Line
BPL	Below Poverty Line
FAO	Food and Agriculture Organization of the United Nations
GO	Governmental Organization
HRLN	Human Rights Law Network
ICDS	Integrated Child Development Services
MEPMA	Mission for Elimination of Poverty in Municipal Areas
NGO	Non-Governmental Organization
PDS	Public Distribution System
PEM	Protein Energy malnutrition
UN	United Nations

Introduction

Since the early 1990s, the Indian economy has developed with incredible pace. India's evolvement from an agriculture dominated society to an internationally recognized economic power, with high growth rates especially in the industrial and IT-sectors, stunned many experts. But rapid economic development and the resulting urbanization go hand in hand with rising prices for social services, transportation and nutrition. Especially the prices for staple foods and fuel have risen considerably since autumn 2007. This makes it, in particular for low-income groups difficult to make ends meet.

Not all parts of society have benefited equally from this economic development and are affected by the positive and negative side effects of urbanization and modernization to different degrees. Especially for less skilled people it gets increasingly difficult to earn a living because the demand for low- and semi-skilled laborers is decreasing in the urban areas and in many cases only hard physical work in the informal sector can be found. Daily waged labor on construction sites, as rickshaw drivers, street food vendors or as domestic workers are the most common occupations in urban low-income groups. These occupations are physically very demanding, often less and irregularly paid and not secured. Only in very rare cases people from the lesser-skilled segment of society can find access to modern day occupations and the formal labor market and benefit directly from the economic and industrial growth. Indirect benefits like increased demand for construction workers or domestic workers by aspiring middle classes offer work opportunities for lesser-skilled people due to economic development but do not allow them to rise on the social or economic ladder, so access to benefits generated through economic development is restricted.

Due to rapid urbanization and high rates of rural-urban migration the demand for housing, food, transportation and social services like health care and education is increasing rapidly which leads to higher prices for nearly all goods of every day live. Since 2007 the price rise was further aggravated by the global economic crisis and by production declines in many exporting countries as well as by falling stock levels of world cereal reserves (Liverman 2011: 14) as well as by shortcomings of local agricultural production. Changes in prices for essential commodities, and especially for food items, make it difficult for low-income households which are already spending the majority of their income on immediate survival to sustain their livelihood. The rise in food prices may reduce the access to food for low-income households

even if food is continuously available in the local markets, but due to its price it is no longer accessible for low-income households at all or in a sufficient amount and quality.

This report investigates into the food security and health situation of urban low- income groups in the emerging Indian mega city of Hyderabad/ Andhra Pradesh against the backdrop of rising (food) prices. It shall answer the question if problems of hunger and malnutrition can still be found in emerging Indian cities, despite their rapid economic development and various governmental schemes and efforts to alleviate poverty and hunger. Therefore influences on the nutritional status of households and the availability of food are investigated on a broader base and include economic and social determinants like rising prices, employment opportunities and social networks. Environmental impacts on food availability and nutrition are only included in the margins of this report. The strategies which are existing within a household to cope with short term shocks and challenges, especially with nutritional stress, are also included with a focus on the individuals/ households agency to meet their livelihood goals especially regarding availability, access and utilization of a healthy nutrition.

To evaluate the nutritional situation of urban low-income groups in the emerging mega city of Hyderabad it is necessary to investigate into the field of food security on a broader base. It is not sufficient to focus only on the amount of food available and if this is “enough” to fulfill immediate needs of food requirement. It is very important to consider the quality of the food which is consumed, because a healthy diet is based on a sufficient intake of carbohydrates, proteins and of micro-nutrients. Besides the quality of the food available and its nutritional properties, its safety in regards to hygienic preparation and storage as well as to harmful attributes is considered. Besides questions of market access and goods availability the existing governmental schemes aimed at poverty alleviation and nutritional and health support are also included in this report. The accessibility and affectivity of these programs can have huge influences on the individual household’s nutritional situation.

To investigate into the actual nutritional situation of low-income households, two urban settlements were selected and interviews were conducted with inhabitants belonging to low-income groups. In these interviews and questionnaires measurable variables were generated to assess the household’s food consumption in regards to quality, diversity, safety and affordability. The individual’s (mostly women) knowledge and its individual assessment of its household nutritional situation were also included to value the individual’s perception and evaluation and to learn about its understanding of the problem of nutrition. This was also used to understand about cultural preferences and believes regarding foods which later on were

contextualized with information about bodily requirements and health issues. In regards to cultural preferences and believes it is also important to examine the nutritional situation of all members of the household (children, elderly, man and women) to determine if differences can be found on the basis of age or gender. This can provide insights into the status of persons within the household and show possible disadvantages or even discriminations against certain groups and lead to an identification of the most vulnerable persons.

It is difficult to determine which illnesses or health problems are linked with nutrition. Other influencing factors like pollution, work load, access to safe drinking water and sanitation, drug abuse and the like, which build an interwoven and circular relationship between nutritional status, health and income/ expenditure or debt burden need to be considered as well to generate a broader picture of the food security situation in urban low-income groups.

To answer the overarching question about the existence or the return of hunger and malnutrition in urban low-income groups in the backdrop of price rises, the following questions emerged:

- Is sufficient food available for the household to manage a sufficient intake of calories?
- How diverse is the food consumed? Are sufficient sources of protein and vitamins available and how often are these consumed and what may be the reason for not consuming these foods more often?
- Can intra-household symptoms of malnutrition, lacking nutrients or unhygienic conditions of food handling be observed and are these symptoms linked with nutrition in the individual's observation?
- Are governmental schemes of poverty alleviation, nutritional improvement or health care and education available, and are these used?
- Can a gender or age bias regarding nutrition and health be observed?
- How do people mitigate, adapt and cope with challenges in their livelihood assets and are they able to meet their needs throughout the year?

To answer these questions the food security framework based on access, availability and utilization of food and the aspect of vulnerability were used as the conceptual framework of study conduction and are described in chapter 1. This is followed by an introduction into the two study areas whose similarities and differences are described to allow comparisons and a better understanding of specific problems. Subsequently the methodology used is described and ex-

planations are offered how and why the research sites were selected and reasons are given for the selection of the target group. Further problems faced while collecting the data are highlighted and tried to contextualize. Afterwards the questionnaires and interviews are analyzed and the data corpus is described and evaluated with a special focus on household finances, availability, access and utilization of food items, quality and quantity of the consumed food and health situation. In Chapter 2 the outcomes of the empirical study are summarized, discussed and contextualized. Similarities and differences in regards to food security shall be shown and it is estimated which groups of society are the most vulnerable in regards to changes of food security determinants and how they are trying to cope and adapt with this insecurity. In conclusion, the main arguments of the food security discourse are collected to sum up the outcome of the study. Here, the interrelations between food security, nutrition and health and price rises and the general economic situation of the household, as extracted out of the interviews, are correlated and a final assessment on the question if hunger returns to urban India is given.

1. Conceptional Background

1.1 Food Security Framework

Since the 1970s the concept of Food Security gained importance as means to assess the nutritional situation of societies and develop strategies to decrease the occurrence of hunger and famine. In the beginning it was mainly focused on food security on the global or national level but since the 1980's the focus was shifted towards access to food on the household or the individual level. The UN defined food security in 1975 as the "availability at all times of adequate world supplies of basic foodstuff…, to sustain a steady expansion of food consumption … and to offset fluctuations in production and prices" (UN in Maxwell, Smith 1991: 68) which was mainly focused on the global level of world food supplies and gave responsibilities to the national states to ensure production and regulate prices. In 1983 the FAO defined food security as "ensuring that all people at all times have both physical and economic access to the basic food they need" (FAO in Maxwell, Smith 1991:68) which already shows the beginning of a shift towards a more individual and household centered perception of food security. The notion of access or food entitlement was introduced into the discussion by Amartya Sen which enhanced the discussion to include also aspects of control over resources. This widened the food security discourse to a livelihood based idea which was no longer built on short time feeding and emergency relief but included coping and adaptation strategies of the individual and a long term perspective of action (Nischalke 2011: 9).

The most widespread definition of food security nowadays was also developed by the FAO in 2003 and defines food security as" […] a situation that exists, when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO in HRLN 2010: 215). This very detailed definition is focused on the individual's nutritional situation and also includes social factors which can influence the individual's access to food like marginalization or social discrimination. Further this definition stresses that besides the quantity of food which is available also its quality and safety and nutritional properties are important to allow living an active and healthy life. The stress on healthy life refers to the widespread occurrence of micronutrient deficiencies or malnourishments which are very difficult to assess with a narrowed definition mainly focused on basic foodstuff, as the definitions of the past did. Further the mentioning of food preferences gives a first glimpse on the concept of nutritional

sovereignty which was developed in the following years and stresses the importance of the ability to feed oneself self-reliantly with healthy and culturally acceptable food items (Sagar 2004: 2).

Therefore it is possible to view food security as the complex outcome of multiple factors, operating from household to international levels which not only depends on the availability from production, but from a suite of entitlements which allow economic and social access to food (Ericksen, Stewart, Dixon 2010: 25). In most concepts food security is believed to be constituted out of three main components which are availability, access and utilization of food items.

Availability of food refers to the quantity, quality and type of food a social unit has in control to consume. This can be available through local or own production and can be influenced by seasonality and modes of production and additional imports. It is an aggregate supply which should be ensured through sustainable growth or imports. Further food can be available through distribution channels like local markets, which bring food to where it is needed. Market availability further depends on modes of exchange in which money, labor or other items can be traded for food (Ericksen, Stewart, Dixon 2010: 29; Nischalke 2011: 9). In addition market availability should guaranty temporal and spatial stability of supply for all segments of society (Sagar 2004: 2).

Access to food refers to the ability to gain access to the type, quality and quantity of food which is required by the social unit by means of labor, production, trade or transfer. Access can be analyzed in regards to the affordability of food which is available in the market, which can be influenced by the individual's purchasing power in relation to prices. Access further shows how well allocation systems like markets or governmental policies and schemes work and if and how they reach the aim to supply food. On the individual basis access also defines whether people are able to meet their social, cultural or other food preferences and requirements (Ericksen, Stewart, Dixon 2010: 29; Nischalke 2011: 10). The concept of access is closely related to the conception of entitlements. The entitlement of an individual is rooted in its endowment which is constituted by its initial resource bundle, which can be transformed through production and trade into food or commodities which than can be exchanged for food. A decline in food availability and a decline in entitlements can occur independently but they can also be interrelated and aggravate each other (Maxwell, Smith 1991: 10).

Utilization of food refers to cultural factors related to the use of food. These can be dietary patterns and food preferences, knowledge about the nutritional requirements of the body,

childcare practices or patterns of household food distribution (Nischalke 2011: 10). Especially in regards to childcare practices many cultural beliefs regarding the right time, amount and kind of food which shall be given to a child exist and not all of them go conform to modern medical knowledge of nutritional requirements. Cultural beliefs about the proper nutrition of certain age groups may lead to mal- or undernourishment of members of these groups. Good examples for this are the not feeding of colostrum directly after birth or weaning food which is very low in protein because protein rich foods like milk or eggs are considered too heavy for small children. Food distribution within the household is an essential component of food utilization and refers to the fact that not all household members necessarily get the same quality and quantity of food. Therefore food security at the household level does not in itself assure that the nutritional needs of each household member will be met (Gragnolati, Shekar, Das Gupta 2005: 33). Gragnolati believes that, depending on the individuals bargaining power, which is based on its income, autonomy, gender and education and also its health situation, it is decided within the household which member gets what quality and quantity of food. This means that the nutritional status of certain household members can be deficient, even if the per capita intake of calories is sufficient or if the household as a whole is food secure (Gragnolati, Shekar, Das Gupta 2005: 34). This distribution pattern is also closely related to cultural perceptions of gender roles and appropriate nutrition for certain gender and age groups. In the Indian context it are often women who eat last and do not get enough food quantity- and quality- wise when the household needs to manage with a limited amount of food supplies. To sum up utilization of food can be described as the ability to consume and benefit from food and is dependent on the nutritional and social value of certain foods and also depends on the safety of the food which is available and affordable by the household (Ericksen, Stewart, Dixon 2010: 29).

Nutritional discrimination based on gender or age does not only affect the individual, it also affects further generations, because under- or malnourished mothers give birth to low-weight infants and mostly cannot breastfeed in the required amount which leads to early weaning and often child malnutrition in the most crucial years for child development (Gragnolati, Shekar, Das Gupta 2005). Besides the nutritional properties of the consumed food its safety in regards to storage and preparation plays an essential role to influence the nutritional and health situation of the individual. Other influencing factors on food safety and health are the access to safe drinking water, sanitation facilities and general environmental hygiene. Lacking hygiene in food preparation or water and sanitation problems increase the spread of diseases and food and water borne problems which can lead to problems of **absorption**. Problems of absorption,

like diarrhea, mean that even if the nutritional value of the consumed food is high these nutrients cannot be absorbed by the body which would also lead to malnourishment (Sagar 2004: 2). Therefore food safety in all its different aspects needs to be considered as an influencing factor when it comes to food security. But unfortunately in the individual's conception the access to food items to fill the stomach is higher or more urgent than considerations about food safety. If the pressure to fulfill basic needs is high, the safety aspects related to food and a healthy nutrition are often the first to be compromised with (Hofmann 2010: 86).

In regards to India it is often stated that access to food and proper utilization as well as absorption of the food available are bigger problems than the availability of food in general to reach food security (Sagar 2004: 2). Especially in urban areas, nearly all basic food items are available in the Indian market throughout the year, but especially with rising food prices, food items which once were available and accessible for urban low-income groups may be still available in the market but they are no longer affordable for them and changes in the food basket occur (Nischalke 2011: 20). If food insecurity can be observed within a household or a community the timeframe of occurrence is also very important to consider. A first distinction can be made between **chronic** and **transitory** food insecurity which gives first insights into the severity of the problem and shapes the development of relief programs which need to address substantially different issues when it comes to chronic food insecurity. Transitory food insecurity can be further divided into **temporary** or **cyclical** food insecurity (Maxwell, Smith 1991: 15). Cyclical food insecurity offers many starting points to develop coping or adaptation measures because its occurrence is much more predictable and its causes easier accessible. Measures of adaptation or coping strategies are adopted by households or individuals as a reaction to changes in their livelihood strategies.

Coping refers to strategies of short time changes; it is a response to immediate changes like a decline in access or availability. Coping strategies are aimed to relief the immediate stress but they are not aimed at general changes of behavior or livelihood strategies (Maxwell, Smith 1991: 29). As soon as the situation is back to normal the developed coping strategies are often abandoned. Coping allows survival and can be used for the protection from short term food insecurity and the preservation of income, but often wears down assets which would be needed in the future and therefore can increase the vulnerability to future shocks and challenges (Ericksen, Stewart, Eriksen 2010: 117). **Adaptation** strategies on the other hand refer to long time changes in behavior due to a permanent change in the ways a household can acquire the necessary food items due to an enduring change in its entitlements which can be based on social, economic, agricultural or environmental changes (Maxwell, Smith 1991: 29).

In contrast to coping, adaptation strategies are aimed at a modification of behavior or strategies that enable people to continue to live and develop in the face of change over the long run and is therefore the more useful and sustainable goal when thinking of long time developments to ensure household food security (Ericksen, Stewart, Eriksen 2010: 117). Coping strategies are often described as being reactive whereas adaptation strategies are considered to be proactive and decrease future vulnerability (Ericksen 2008). Both, the ability to cope with or adapt to changes are dependent on the household's access to assets including physical, financial, social and human capital, they are important determinants of the household's ability to survive stress situations and if its vulnerability to shocks on the existing system.

The idea of **Vulnerability** is therefore another important factor in assessing the food security status of a household or a society which is closely linked to access to assets and the household's ability to cope or adapt to changes. The idea of social vulnerability is focused on human welfare and the household's livelihood strategies and emphasizes the importance of influencing factors like access to assets, inequity and political and social conditions (Ericksen, Bohle, Stewart 2010: 68). Vulnerability is often used as a substitute for poor or poverty and is often not used with a clear definition. Vulnerability and poverty are related but they are not the same and should not be used synonymous. Poverty refers to a lack of resources or assets while vulnerability refers to the exposure to contingencies, the defenselessness, insecurity and exposure to risks, shocks and stresses and the household's difficulties to react to those (Chambers 2006 [1989]: 33). Vulnerability is described as the inability to cope with external pressures or changes which may lead to an adverse outcome. Therefore vulnerability needs to be understood as a "function of exposure, sensitivity and coping or adaptive capacity" (Ericksen 2008). According to Chambers vulnerability has two sides, the **internal** and the **externa**l side. The internal side of vulnerability refers to the individual's defenselessness, its inability and lack of means to cope with changing situations without damaging loss, which can be rooted in the household itself. Examples for the internal aspects can be illnesses of household members, problems of drug abuse or the like which make the household members become physically weaker, economically impoverished on a higher rate, socially dependent, humiliated or psychologically harmed (Chambers 2006 [1989]: 33). External influences on vulnerability are risks, shocks and stresses to which the household is subject like environmental impacts on food availability, price rises, economic crisis and the like; in short they are the households risk to face hunger or famine (Chambers 2006[1989]: 33; Ericksen, Bohle, Stewart 2010: 68). According to Misselhorn food system vulnerability, which refers to the vulnerability of food production, distribution and consumption, is often caused by political corrup-

tion which restrains and obstructs the development of infrastructure, technical assistance or the development of markets in certain regions and therefore influence the vulnerability of household by political measures (Misselhorn, Eakin, Devereux 2010: 91).

To sum up, vulnerability can be described as a function of the lack of choices a household has and social inequity. Vulnerability is constituted by multiple layers and different influences like environmental conditions, entitlement changes and political and social backgrounds and also a function of frequency, intensity and duration of previous crisis exposure (Maxwell, Smith 1991: 12). It can be observed that people who have greater endowments of resources and are entitled to use them are better able to deal with shocks and challenges than people who can only command over a limited resource bundle. Therefore a diversification of livelihood strategies is very important to create a range of strategies to fulfill ones basic need and to build a buffer to shocks and challenges as a means of resilience (Ericksen, Bohle, Stewart 2010: 69).

Resilience can be understood as "the capacity to absorb change without shifting to an altered state with different properties" (Ericksen 2008). To reach resilience "the buffering capacities of vulnerable livelihood systems need to be supported to strengthen the adaptive capacities of households and institutions to enable them to deal with challenges on their livelihood strategies in a resilient way" (Ericksen, Bohle, Stewart 2010: 73). The successful use of adaptation strategies and diversified livelihood strategies can lead to resilience towards shocks, challenges and stresses and consequently supersede vulnerability and lead to food and livelihood security.

It is very important to view food security as an integral component of livelihood security. Of course food security is not the only factor influencing the overall livelihood situation but it is an important contributor. Only under this perspective it gets possible to "understand" why certain decisions, which appear to be irrational on the first sight, are taken by the individual to subsist in the long and the short run. Examples for this can be the saving of food grains for the next year while simultaneously cutting down in food consumption or the mortgaging of specific entitlements (Maxwell, Smith 1991: 28). Further it is very important to give importance to the poor individual's point of view, its concepts and needs and to consider that the poor have own priorities which also may be different from what was expected by the (international) observer. Notions of self-respect, dignity, independence and mobility can influence decisions in the same degree as the fulfillment of immediate needs may. In regards to aid,

development and support it is important to remember that the individual has an agency, a scope of action and specific action patterns and is not only a heteronomous subject.

1.2 Problems of food security in the urban context in India

Polly Ericksen summarizes the issue of food security and the problems caused by its failure as following:

> "Food security is a principal outcome of any given food system, although in many cases food security is not achieved; instead, people are undernourished and face regular hungry seasons, or struggle with a host of non-communicable diet-related diseases or spend the major portion of their income on poor or inadequate diets" (Ericksen, Stewart, Dixon 2010: 9).

In the following chapter the specific problems related to food insecurity in urban areas are described. The rapid rise in food prices since autumn 2007 led to an increase in the number of food insecure households and people suffering from mal- or undernutrition and further slowed down the progress of improving food security considerable which has been slow in India even before the economic crisis of 2007-08 (Liverman, Kapadia 2010).

Especially in the urban areas food insecurity is increasing because there financial income is the most important asset to acquire food because urban dwellers highly rely on purchases in the market (Liverman, Kapadia 2010: 6). The urban settlers have lesser possibilities to generate their food items by own production, urban agriculture and husbandry are mostly only possible on a very small scale and can only provide additional nutrients, they are not able to supply a household totally (Cohen, Garrett 2009: 9). Further it can be observed that on average food insecurity is often higher in urban areas than in rural areas despite the higher income in urban areas due to the dependence on market purchases and the higher expenditures for general living like rent and transportation (Cohen, Garrett 2009: 1). According to Liverman urbanization changes the relationship between food demand and food supply and increases the demand in urban areas where production is less which influences market availability and prices considerably. Urbanization further increases the ratio of urban poor households due to high migration rates of low skilled rural residents. Further it can be observed that, particularly in areas with high migration rates with migrants originating from various parts of India, there are only few or less developed social networks which lead to a weakening of informal safety nets and increase the importance of individual financial assets (Cohen, Garrett 2009: 8). Especially poor households who are net buyers of food items are extremely vulnerable to changes in the price structure of food items or in employment opportunities, so their food security and

general living situation was extremely aggravated by the economic crisis of 2008 and by the simultaneous price rises (Liverman, Kapadia 2010: 8).

The rise in food prices reduced the access to food for low-income groups, even though all food items stayed available in the market and there was no shortage in supply, the food was no longer affordable for those groups of the urban population who already spent the biggest part of their monthly income on food beforehand. Another factor which needs to be considered is the frequent inability of urban poor households to buy food items in bulk, either due to a lack of financial means or a lack in sufficient storage facilities, which excludes them from the benefit of lesser per-unit rates in bulk sales and increases their food expenditures even further (Cohen, Garrett 2009: 7). Due to this, Liverman observed that many households cut down their food consumption either in regards to quality or in regards to quantity or even both (Liverman, Kapadia 2010: 9). The already tensed food accessibility in 2007-08 was further aggravated by influences of the global economic crises like loss of employment, loss of remittances and general loss of income which further reduced the food security in urban low-income groups (Liverman, Kapadia 2010: 9).

Various strategies of adjustment to rising prices can be found in literature and with help of questionnaires it is tried to find some of those in the selected sample. The most common strategies which can be found in literature are often related to reductions of household expenditures which can either be directly aimed at changed food consumption or on savings in the non-food expenditures. Cohen and Garret observed a cutting down in expenses on transportation, health and education as a first measure to preserve money to assure food supply but which decrease the households future chances for development (Cohen, Garrett 2009: 10). A reduction in expenditures for food items is often achieved by the attempt to buy lesser quality goods which are available at cheaper rates and by a consumption of less diverse food items which is caused by a reduction of everything which is relatively higher priced like meat and dairy products, fruits, vegetables and pulses. The food consumption is consequently often reduced to an intake of only staple foods, which are often of bad quality, protein or vitamin rich foods are only seldom left within the average diet. Other strategies to cut down food expenditures are the skipping of meals and the reduction of the quantity served in each meal (Cohen, Garrett 2009: 10). Another factor which is often believed to influence change in (urban) dietary patterns, is related to increasing rates of women working outside the home and the decline of joint families. This is believed to lead to lesser time availability for the preparation of food and to a change from traditional millets and freshly prepared rotis (unleavened flatbread) to a diet based on rice and ready-made breads which are less time-consuming in

preparation but include fewer nutrients (Cohen, Garrett 2009: 6). On the long run such changes in the dietary pattern lead to increased occurrence of micronutrient deficiency disorders and higher incidence of diseases, higher maternal and child mortality, poorer school performance and reduced work productivity (Cohen, Garrett 2009: 10).

In the past decades India has been very successful in responding to challenges of food security caused by calamities and claims that it is self-sufficient in food grains and has achieved food security in the macro-sense (Sagar 2004: 3). But nonetheless the average per capita calorie intake has decreased considerably since 1983 and the state of Andhra Pradesh has one of the lowest rates of calorie consumption in India and a poverty line which is drawn very low (Patnaik 2009: 224). Sagar claims that "poor governance is the root of many problems associated with the food administration and other programs for the poor" (Sagar 2004: 10) and that the "Indian democracy has failed to induct people into the political arena with a genuine commitment to serve the people" (Sagar 2004: 10) which he considers as important explanations why the progress to establish food security for the poor in India has made so little progress.

Box 1: The poverty line

The Indian government has defined a poverty line which allows people who have an income below this line to benefit from social welfare programs. The poverty line is "adjusted" every few years. In 2007/08 about 40 % of the urban population was belonging to the BPL (below poverty line) families (Patnaik 2009: 132).
In 2011 the urban poverty line was fixed at 37 rupees per day and person, which is extremely low and unrealistic. It is often believed that the poverty line was deliberately lowered by a reduction of the consumption level for political reasons to paint a better picture in official records to show a decreasing poverty rate (Patnaik 2009: 212; Sridhar 2008: 116). In the past the poverty line was calculated on the basis of nutritional determinants to guarantee the ability to supply oneself with the minimum intake of calories which was advised by medical professionals and the food and nutrition board. Nowadays calculations are detached from the link to calorie requirements and if estimations about calorie intake are given, they are much lower than the nutritional guidelines of the 1970s. According to this argumentation malnutrition is willfully considered as normal.
Due to this lowered poverty line many former beneficiaries of governmental schemes, who in reality are still poor, are now excluded from access to these schemes like ration cards, because their income lies above this new poverty line.
According to Rama Melkote it is be necessary to change the guidelines for poverty line estimations and minimum requirements for survival to modern times and modern needs and adjust it to the 21st century's reality. For example in many calculations of poverty line, holders of modern amenities like cooking gas or two wheelers are in general excluded from the category "poor" and therefore deprived of access to governmental schemes like PDS and ICDS (Rama Melkote 27.10.11).

1.3 Hunger and Malnutrition

Hunger and malnutrition are closely interrelated and highly dependent and it can be difficult to differentiate between both. It is necessary to distinguish different uses of the word "hun-

ger". Hunger can be understood as a lack in overall calorie intake or as a lack in the intake of certain kinds of food which is much closer to the definition of malnutrition. Hunger, when it equals undernutrition is defined by the World Bank as follows: "the pathological condition brought about by inadequacy of one or more of the essential nutrients that the body cannot make but that are necessary for survival, for growth and reproduction, and for the capacity to work, learn and function in society" (WB 1987 in Sridhar 2008: 80). In 1999 this definitions was expanded and now also includes inadequate food intake, illness and deleterious care practices (Sridhar 2008: 80). In my understanding, malnutrition refers to the measurable symptoms of inadequate nutritional intake which can be derived through measurements, weighting, blood test and the like. Whereas I understand hunger as a more subjective category based on the individual's perception of the feeling of hunger and the need to fill its stomach. Hunger has both, an objective and a subjective component. I will subsume the objective component of hunger under malnourishment, even if there are slight differences in both concepts due to the fact that malnutrition can also occur in cases of supernutrition. But this component of malnutrition is excluded from this study which will understand hunger as a feeling of the individual and malnutrition as its physical effects. But it is important to keep in mind that the individual's articulation of hunger is not able to capture hunger or undernutrition scientifically and effectively, because after a certain time of lesser food consumption the body adjusts and gets used to this reduced intake. This means that even the body can stop to demand for more food intake even if not enough calories and micronutrients are consumed. The individuals feeling can therefore be misleading and should not be used as the only measure of hunger (Saxena 2009b: 503). This study will investigate into the relation between hunger and malnutrition on the individual level and will evaluate if hunger or what kind of hunger can be found in urban low-income groups. In regards to this it is often stated that malnutrition and not "hunger" is the main problem of the urban poor in India (Nischalke 2011: 16), this thesis shall be discussed here.

Malnutrition and resulting severe illnesses or deaths are caused by a combination of facts like inadequate dietary intake, which is closely linked to household food insecurity, a common lack in maternal and child care and general insufficient health services and an unhealthy living environment (Maxwell, Smith 1991: 24). It is important to keep in mind that due to these interactions between common obstacles faced by urban low-income households it is impossible to trace the origin of a certain problem back to one cause like malnutrition, it is always a combination of various problems and lack of access on various degrees. Further it can be observed that chronic malnutrition in contrast to famine is not necessarily visible. If everybody

in a community is slightly stunned and a little thinner that the average, it gets very difficult to generate awareness that the way everybody looks and eats is already malnutrition. Another problem in this regard is that famine or catastrophic hunger can be easily portrait in the media whereas it gets very difficult to portrait chronic hunger or malnutrition and raise awareness or sympathy in the non-affected groups of society. Especially in India there is a great deal of denial in the upper and middle classes who believe that "poverty cannot be that bad", which makes it difficult to target issues of poverty successfully on a broader societal base (Rieff 2009).

According to Veena Shatrugna the Indian government has set or accepted certain stages of malnourishment as a norm due to its designs of supplementary feeding programs and its revising of nutritional guidelines since the 1960s. Since then the nutritional recommendations changed drastically to a cereal based one, animal proteins were replaced by cheaper plant proteins and the recommended overall intake rates of calories, proteins and micronutrients like calcium were reduced drastically when compared with guidelines from the 1950s. This cutting in the estimated bodily requirement was, so Shatrugna, only possible because certain symptoms of malnutrition like reduced height in adults were accepted as the norm and not as the first symptoms of malnutrition, so the minimum requirement for a healthy survival could be lowered (Shatrugna 2010. 127pp.). Further Rice was introduced as the basic staple food and traditional grains and millets which contain more nutrients were replaced by white milled rice. According to these revised nutritional guidelines the Public

Box 2: The Public Distribution System (PDS)

The Public distribution system was first introduced in 1939 and offered subsidized food grains to the general Indian population and is one of the oldest food subsidy programs in India. In 1997 the PDS was changed towards a Targeted Public Distribution System which now distinguishes between families below and above the poverty line. Through this targeting the major proportion of subsidies shall be transferred to those living below the poverty line. Ration cards are issued to show to which kind of subsidy the family is entitled to.

In 2009 each BPL family, with a white ration card was entitled to receive 35 kg of wheat or rice, sugar and kerosene at highly subsidized rates. People of the above poverty line (APL) category with a yellow ration card could still get food grains through the PDS, but the quantum of subsidy is very little. About 40% of the BPL families, who are grouped as the extremely poor, are also entitled to a red ration card called Antyodaya Anna Yojana (AAY) which enables the beneficiary to buy food grains at roughly half the price of the general BPL families (HRLN 2009: 272). In 2009 around 65 million families received subsidies in the BPL category and another 25 million were recognized as AAY (Saxena 2009: 539).

Overall India more than 400.000 Fair Price Shops sell the subsidized food grains to the ration card holders. In 2009 the rates for white card holders were Rupees 4.2 per kg for wheat and Rupees 5.6 for rice, which is approximately half the price of the open market. Rates for holders of the AAY card were Rupees 2 per kg of wheat and Rupees 3 per kg of rice (Saxena 2009: 539).

Distribution System (PDS) and other governmental schemes for nutritional support decide what quantity and which kind of food or supplement they shall distribute in poverty relief programs. Shatrugna claims that most of these changes in the nutritional guidelines were driven by a desire to cut down expenses in targeting nutritional problems and did not take into account what these changes could mean on the grass root level. She states that "[t]here is no [reason] why the scientifically derived nutritious diet should be the cheapest" (Shatrugna 2010: 130). Further she observed that nowadays problems of lacking nutrients are recognized again, but the suggested solutions are based on additional drugs or scientifically enriched cereals instead of attempts to change the nutritional patterns towards a balanced healthy diet (Shatrugna 2010: 134) which will not target the causes of the malnutrition dilemma, only artificially reduce its effects and make it even less visible than today.

Box 3: The Integrated Child Development Services (ICDS)

The ICDS is a government program founded in 1975, aimed to care for the most vulnerable groups of society, namely children under six years, pregnant and lactating women and adolescent girls through supplementary feeding programs, health care, immunization and basic education. Each rural habitation or urban slum with more than 1000 people population should have an Anganwadi Centre where the children can spend the day, receive food and supplementary nutrition and preschool education. Further health checkups, growth and weight monitoring and health and nutritional counseling of parents shall be conducted in this center by an Anganwadi teacher and if health problems or malnourishment can be observed supplementary nutrition shall be distributed and treatment shall be advised. Each ICDS center should distribute the following on a daily basis.
Each child under 6 gets 300 calories and 8-10 gr protein;
Each adolescent girl, pregnant women and lactating mother gets 500 calories and 20-25 gr protein;
Each malnourished child gets 600 calories and 16-20 gr protein (HRLN 2009: 217pp.).

According to Gopaldas practically all members of low income groups are underfeed and face chronic hunger, further most of these chronically hungry suffer from Protein Energy Malnutrition (PEM) in various grades, additional other micronutrient deficiencies and have smaller body sizes than the average (Gopaldas 2009: 204). India has one of the highest percentages of undernourished people in the world. Almost three quarters of all children are affected by under- or malnutrition and the decline in those rates are much lesser than in countries with similar economic growth rates (Dittrich 2010: 12pp.). PEM and also micronutrient deficiencies affect child development and can lead to retarded physical and cognitive growth and increase the susceptibility to diseases. Children below the age of two are the most vulnerable because nearly all retardations that occur at this age are irreversible (Gragnolati, Shekar, Das Gupta 2005: 1pp.). To reach long term effects in the fight against malnutrition it is therefore very important to further increase the attention towards pregnant

women, nursing mothers and children below two. The Program of ICDS takes first steps in this direction, but they need to be expanded, better implemented and further focused on these most vulnerable groups (Gragnolati, Shekar, Das Gupta 2005: 12/ 30). Following the most common micronutrient deficiencies and malnutrition induced diseases are described in short even if they could not be assessed in this study directly because no blood testing or measuring took place, but symptoms could still be acquired indirectly through observations, derived from the daily food consumption and gathered from local health professionals.

Protein-Energy-Malnutrition is also called **Marasmus** and occurs if the consumed food is lacking sufficient calories as well as enough protein. It often begins with a general lack in energy (calorie) consumption which on the long run leads to protein deficiencies as well because all reserves of the body are used up to generate energy. It leads to stunned growth, wasting, dehydration of somatic cells, muscular atrophy, diarrhea and starvation death on the long run (Schlieper 1986: 439).

Another very common form of (child) malnutrition is called **Kwashiorkor** and refers to an extreme **protein deficiency** while there is a sufficient consumption of calories through carbohydrates. This form of malnutrition often occurs after weaning a child when the previously consumed protein rich breast milk is not or cannot be substituted by other sources of protein. This leads to stunned growth, the development of edema, liver impairment like cirrhosis of the liver and diarrhea (Schlieper 1986: 438). These two malnutrition induced diseases can occur in a wide spectrum of severity, in varying combinations of each other or together with different micronutrient deficiencies. It is very rare that only one form of malnourishment is affecting the individual, in reality it is in most cases a combination of many symptoms ranging to different sides of the spectrum.

Vitamin A deficiency affects the eyesight and can lead to blindness, further it increases the vulnerability to respiratory and gastrointestinal diseases (Gragnolati, Shekar, Das Gupta 2005: 6).

Iron deficiency causes anemia and is highest in children and pregnant women. It increases the risk of low birth weight children, premature deliveries and peri-natal and neo-natal mortality. In case of iron deficiency in childhood it can lead to retarded mental development (Gragnolati, Shekar, Das Gupta 2005: 7). Further iron deficiency affects the ability to perform physical work due to increased weakness and tiredness (Gopaldas 2009: 205).

Iodine deficiency affects the birth weight of children and can lead to impaired growth and in the worst case to the development of goiters and is believed to be the most common cause for

preventable mental retardation and brain damage in children (Gragnolati, Shekar, Das Gupta 2005: 7). It affects the micro-development, the visual perceptual organization, visual motor-coordination and the speed of information processing (Gopaldas 2009: 205).

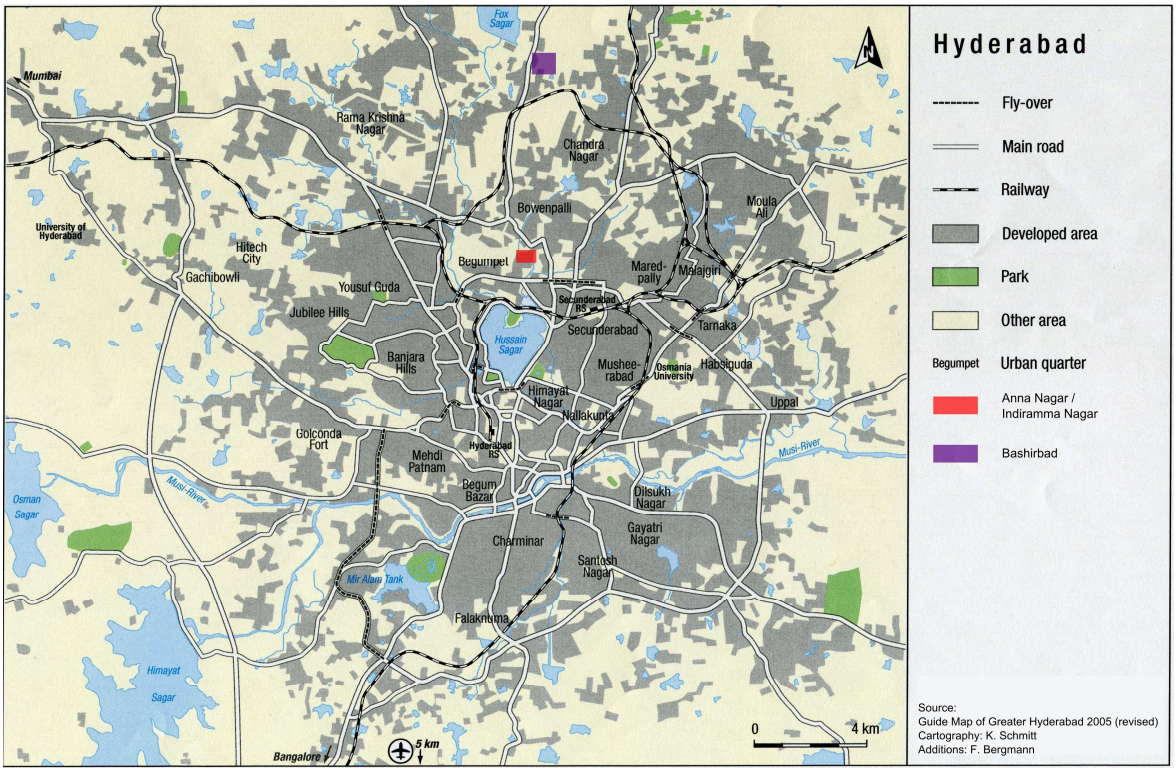
Unsafe water increases the likelihood to develop symptoms of PEM or micronutrient deficiencies because many water borne parasitic or helminthic diseases, especially those affecting the gastro-intestinal-tract can directly decrease the ability to absorb nutrients dramatically and therefore water safety needs to be included in an assessment of the nutritional situation of an individual (Gopaldas 2009: 204). Diarrhea caused by unsafe water, unhygienic food handling which can cause food poisoning is one of the most common health problems faced by urban low-income groups due to their often unhealthy living conditions in an often slum-like environment without developed sanitary infrastructure and the like.

Based on this conceptual background a case study was conducted to investigate into the health and nutritional situation of urban low-income households in Hyderabad to answer the question if hunger returns to urban India in the aftermath of the global economic crisis and the drastic rise in food prices.

2. Empirical Analysis

2.1 Description of working area

Two urban neighborhoods were selected as research sites for this report. These were the localities Indiramma Nagar and neighboring Anna Nagar in Rasoolpura close to the old airport in Begumpet and three small squatter settlements called NCL Colony, Ganga Colony and Patelkunta close to Bashirbad in the northern outskirts of Hyderabad. These locations were selected to compare one urban slum with a continuous history of settlement of over 30 years with a newly established, predominantly migrant populated slum area in the outskirts and assess the different problems faced by different categories of urban low income groups. Both research sites were located in Secunderabad. Secunderabad and Hyderabad are historic twin cities which nowadays are nearly completely merged, and Secunderabad has become a part of Hyderabad without separate administration.



Map 1: The location of Anna Nagar/ Indiramma Nagar and Bashirbad

Indiramma Nagar and **Anna Nagar** are two neighboring compartments of Rasoolpura which is one of the biggest slums in Hyderabad. Rasoolpura belongs to Trimulgheery municipality in Ranga Reddy District. It is built on land belonging to the former airport of Hyderabad in

Begumpet and on former military property which is now under administration of the central government. This means that the government of Andhra Pradesh is not able to make any decisions regarding this land. The residents of Anna Nagar and Indiramma Nagar do not have permission of settlement, land ownership or patta[1], but their status is recognized. In the last few years the settlement received an official electricity connection with nearly each house receiving a separate electricity bill which can be used as a proof of address when applying for government schemes, jobs or modern amenities like mobile phones. Water is supplied by cantonment board with water tankers which deliver water every two or three days. The settlers of both Indiramma Nagar and Anna Nagar are convinced that they will receive patta status, as promised by the local government soon, because the government conducted many infrastructural improvements like electricity connection or canalization access in their area. This, so they believe, would not be done if there would not be a good chance of legalization soon. The residents of Anna and Indiramma Nagar do not fear eviction or displacement by the landowners due to these reasons and are often very motivated to work for the improvement of their individual living situation. Most houses have own sanitary facilities and most of them are connected to a closed canalization system.

Within the settlement different pockets can be observed. Those pockets vary in infrastructural development and group of population living in them. Some of these pockets are comparatively well developed and have small brick houses with concrete roof cladding, which are very nicely decorated and show the improved status of those people living there. Other houses are not so well developed and built out of corrugated sheet iron. It can be observed that the houses closer to the main roads and alleys are better developed, the margins of the settlement and the area close to the small open stream are least developed.

Picture 1: Alley in Indiramma Nagar I

[1] Patta Status can be given by the revenue department and is similar to land ownership status. After receiving patta status one is recognized as a legal settler and can also sell the land. Further a status of patta makes it easier to take part in governmental programs of social welfare because one is in possession of legal documents and a recognized and registered settler of a certain area.

Settlement in Anna and Indiramma Nagar started at least 30 years ago and many people are living there since then. Due to this continuous, long time settlement the social infrastructure is well developed. Friendships, women's groups, neighborhood help and informal social security networks offering solidarity are quite well developed and based on the long time personal knowledge of the other residents.

Picture 2: Alley in Indiramma Nagar II

Most settlers are in possession of ration cards and can access the Fair Price Shop in the adjoining area. There are government schools, various Anganwadi centers and small health centers available throughout the area. There is one governmental urban health center and various private medical shops and small clinics scattered throughout the settlement. Kirana shops can be found frequently and mobile vendors supply the area with additional food items and other household supplies. The area of Indiramma Nagar and Anna Nagar can be described as a very well developed slum area which, in most areas, does no longer correspond with widespread images of what a slum is like. In some pockets the differentiation between urban poor or lower middle classes gets increasingly difficult.

The settlement of **Bashirbad** is located on the National Highway 7 close to Kompally, which is one of the fastest growing suburbs of Hyderabad, approximately 10 km north of Paradise Crossing in Secunderabad. It belongs to the Quthbullapur municipality in Ranga Reddy District. In the last five to ten years the area of Bashirbad developed from a small village with lots of greenery and open space to a buzzing construction site to build new residential areas for the growing population of Hyderabad. This boom in construction lead to high migration rates of (mostly rural based) daily wage laborers who now live in most of the illegal encroachments in Bashirbad. The three squatter settlements NCL Colony, Ganga Colony and Patelkunta have a population which is predominately occupied as daily wage laborers on construction sites in the nearby areas. Each settlement is populated by 20 to 40 families and there-

fore rather small. All three settlements are built on private property which is presently not used by the owner and consequently squattered. The settlers face constant threat that they will be evicted from these places and that their belongings are destroyed which happens quite frequently.

Picture 3: NCL Colony Bashirbad

The NCL Colony for example is located at its present spot since January 2011 after they were evicted from their last settlement in the neighboring land plots. Most of the settlers live in Bashirbad area since the last two to five years and shift their huts frequently. Most of the people in all three settlements live in small tent like huts without sanitation facilities or (official) electricity. Some of these huts have a kind of paved floor and a separated cooking area. The walls can be built with bricks embedded in mortar or with simple piled stones. Due to their unsecured living situation and the constant fear of eviction, investments into improvements of the living and housing situation are extremely rare; even if financial surplus is available it is not invested for these reasons. Bore water which is not further treated before consumption is used as drinking water in all three communities. The NCL Colony and Ganga Colony were located close to main Bashirbad on some unused shrubbery plots in the village margins, whereas Patelkunta was located approximately a 15 minutes' walk away into the surrounding greenery and is already belonging to the neighboring municipality Alwal. Ganga Colony is divided by a trench in which the bore water pipe is ending. There drinking water is fetched and washing is done but the trench is also used for waste disposal which creates unhealthy conditions. The community in Patelkunta is predominantly Muslim and there the huts are mud-walled with flat concrete roofs. All three settlements are

Picture 4: Huts in NCL Colony

populated with people originating from various villages - predominantly from Mahaboobnagar and Kurnool district in the Telangana region of Andhra Pradesh - who have migrated in the last few years in search for improved living conditions. Due to the short time these settlements exist, only few social networks (above the family level) have been developed and the individual's ties and attachments to its home village are still very strong. Due to their non-legal status of settlement they do not have access to ration cards and other governmental schemes in Hyderabad. In some cases they have cards issued in their home villages.

2.2 Methodology

To investigate the question of hunger in urban low-income groups the two previously described areas were selected to compare the situation within a long established community with the situation of newly arriving migrants who form the bulk of the "new" urban poor. Standardized questionnaires were distributed in all five communities to collect data about the general economic situation of the household with a special focus on health and nutrition.

The questionnaires consist of three parts. The first part asked questions related to the households' structure and economic situation. This included questions concerning the income of each household member, the household's expenditures for different purposes ranging from food to education, transportation or intoxicants. Further special expenditures caused by illnesses or social functions/ obligations like marriages were included to assess the debt burden and evaluate the relation between household income and expenditure. Changes in the employment situation throughout the year are assessed to compare those with seasonal changes in the availability of food to check if correlations can be found. The second part was focused on food availability, accessibility and possible strategies to deal with changes in availability or accessibility. These included questions regarding the different sources of food from market to social schemes and own production, and consumer behavior. The household's assets like storage facilities, land and garden plots and animals were included as well as its entitlement to social schemes, to generate information about its dependence on the market. The existence of social networks was included in the assessment as well as possible strategies to cut down on the food expenses when this was felt necessary.

This part gave first insights into the food security situation of the household, its dependence on the market and its endowment with assets to cope with or adjust to changes in food availability or income. These investigations were intensified in part three which focused on nutri-

tion and food borne diseases. Here it was tried to assess the amount and quality of food which was consumed by different people within the household. The weekly frequency of consuming certain food items was assessed to allow conclusions about the supply of micronutrients and deduce first hints of existing malnourishments. Reasons for the observed nutritional pattern were collected to check for correlations with rising food prices. In addition, the access to sanitation facilities and drinking water was assessed, and further questions were asked regarding the health situation of household members and the individual's assessment of the possible causes of these problems. All this information linked together provides first insights into the general food security situation of certain households, which are further investigated with detailed interviews, that were conducted with a selected group of participants of the questionnaire based survey. The used questionnaire can be found in the appendix.

Women (female heads of household/ wife of head of household) belonging to urban low-income groups were selected as this study's target group. It was believed that it would be possible to get a better quality of information from women because, in regards to traditional gender roles and the intra-household division of labor, they are the ones who are responsible for everything concerning food and nutrition. Saxena states that due to traditional gender roles men do not know much about food and are not involved into preparation and distribution. Therefore they may not be aware of the quantity and quality of the food which is left for the females in the house after the males have eaten. Further he believes that men often do not want to admit problems of the household which may be linked with their inability to supply and provide the family with sufficient financial means (Saxena 2009b: 509). Due to this reasons it was assumed that women are better informed about the actual situation of nutritional supply in the household because they are the ones preparing the food and the ones who have to manage with limited resources. Further it was believed that they would speak more openly about the economic or social problems they have to face in regards to food supply. This assumption was partially confirmed in some interviews which were conducted with males or the couple together in which a much brighter picture was painted than in interviews with female neighbors and whose statements were mostly nonconforming with each other.

21 questionnaires were distributed in Anna Nagar and Indiramma Nagar where the respondents were only female. Due to the similarity of circumstances it was decided to conduct detailed interviews only with residents of Indiramma Nagar. Six detailed interviews were conducted with residents from Indiramma Nagar whose statements in the questionnaires diverged from the average in the positive or the negative direction or who wanted to be interviewed because they face special difficulties.

Further people were asked questions while strolling through the area and stopping at kirana shops, medical shops, medical clinics, fruit vendors and people engaged in food preparation. It was possible to talk to one local doctor and the teacher of one anganwadi center. In addition we could interview one former community worker who was active in this area in the past and nowadays works with MEPMA (Mission for Elimination of Poverty in Municipal Areas) to get a situational overview by a professional social worker.

In the Bashirbad area 20 questionnaires were distributed in NCL Colony, 6 questionnaires in Ganga Colony and 11 questionnaires in Patelkunta. In NCL Colony five interviews were conducted with males and one with a couple. In four out of these it is highly implausible that the given answers are correct, so these cases need to be treated with caution. After evaluating the questionnaires it was decided to continue with detailed interviews only in NCL Colony due to a lack of time, a better quality of responses and a higher motivation of people in this community to answer questions. In most questionnaires from Ganga Colony or Patelkunta the information given was not consistent and especially in regards to economic questions highly implausible. Similarly to Indiramma Nagar people whose answers in the questionnaires diverged from the average were selected for further interviews. Unfortunately in both areas not everybody was available again or willing to give further information, so some persons whose questionnaires promised interesting information worth further investigation could not be interviewed again. Due to a lack in time and the unavailability of interview partners due to their absence in the festival times of Dasara and Diwali only four detailed interviews could be conducted in NCL Colony.

One further interview was conducted with a female NGO teacher belonging to the lower middle class of Bashirbad and two social workers of this NGO called Ashritha, to get overview information on that area and the specific problems affecting the settlers. Due to the total lack of infrastructure in these settlements no further interviews were possible with shopkeepers or medical professionals and the like.

Besides the three interviews with local experts, who were directly working in the studied communities and therefore could give professional insights into the living situation within these communities, six additional interviews were conducted with general experts. These were people engaged in social work, human rights advocacy or civil society movements. All six interviewed were working with NGOs or GOs in the broad spectrum of social development and food security. A table giving a short overview of the persons interviewed and their spe-

cific situation which led to their selection as interview partners or their institutional background in case of the interviewed experts can be found in the appendix.

A team of six assistants helped conducting and translating the interviews and establishing contacts in the selected research areas. These were four interpreters and two local guides. The two interpreters in Bashirbad worked as a team and together translated the questionnaires and interviews and filled in for each other. One of these interpreters was a social worker with Ashritha (the local NGO working in Bashirbad) and the other one a BTech graduate from Bashirbad. In Rasoolpura the questionnaires were translated by the former community worker and the open interviews by a student of social work from Osmania University. The local guide in Bashirbad was the female NGO teacher and in Indiramma Nagar a female worker in the urban health center offered to guide our research in this area. Due to this close link with NGO or community workers it was very important to make sure that this survey would not be linked with the work of these institutions in the interviewee's perception which could lead to adjusted answers. It is not possible to fully reject that the involvement of known social workers may have shaped some answers, but it was tried to eliminate such effects through transparency in explaining our motivations without promising immediate actions or benefits for the interviewed. The quality of the translations varied and in case of the open interviews in Indiramma Nagar it was possible to gather a lot of additional information due to detailed conversation with the research assistant. He was more than willing to share his thoughts and explain the context and share background information which allowed a better and detailed understanding of the individual's situation. In case of Bashirbad the gathering of additional background information was not as easy because of a lesser proficiency of the English language and the different background of the interpreter. To assure anonymity of the interviewed inhabitants of Anna Nagar/ Indiramma Nagar and Bashirbad their names will be shortened and only the first two letters of the forename are used to identify the interviews.

2.3 Evaluation of Questionnaires

While evaluating the questionnaires it was noticed that in case of the questionnaires distributed in Indiramma Nagar and Anna Nagar, questions allowing for multiple answers often only received single answers. This makes it difficult to compare these questions, because in Bashirbad in nearly all questionnaires multiple answers where given when possible. In retrospect it is not possible to determine if this difference in the answer pattern is caused by misunderstandings between the author, the interpreters and the interviewees or if really only one

answer was intended. This possible cause for diverging answers needs to be kept in mind when analyzing the questionnaires. Due to the small sample size of only 37 and 21 questionnaires outlier cases and extreme examples need to be considered in particular because they would affect the average disproportional and also lead to the wide range of answers. For the whole evaluation of the data it should be kept in mind that if individual perceptions or situation assessments are evaluated, the data often needs to be adjusted, because it could often be observed that situations which are already troubled are considered to be normal. It needs to be considered that the frame of the researcher and the interviewee could have a different scale and that data which implies a very positive situation can either be explained by exaggerations or by a different perception of the gravity of the individual's situation. Therefore a mental downward adjustment of selected data should be included when interpreting the data.

2.3.1 Household background and economics

The average household size in both areas was 4.43 people which allows easy comparisons of the further aggregated household data, because it can be assumed that the average household composition is based on similar conditions. The average ratio between income earners and dependents is close to a balanced ratio of 1 in both areas with a slightly better ratio in Bashirbad area (1.02 in Bashirbad against 0.98 in Anna Nagar/ Indiramma Nagar). This may be related to the fact that in most cases the younger generation in Bashirbad starts to work and earn money at a younger age than in Anna Nagar/ Indiramma Nagar where the rates of school attendance in the older age groups seem to be higher and the children are therefore longer dependent from their parents. On the individual household level there can be huge differences within the settlements as well as in comparison between the settlements. The household size ranged from 2 to 7 members and the ratio between earners and dependents could be extremely

Households' monthly per capita income (up to)	**Bashirbad (n=37)**		**Anna Nagar/ Indiramma Nagar (n=21)**	
1000 Rs.	12	32%	8	38%
2000 Rs.	15	41%	9	43%
3000 Rs.	6	16%	3	14%
> 3000 Rs	4	11%	1	5%
average	1775 Rs.		1460 Rs.	

Table 1: Households' monthly per capita income

unbalanced which can be reflected in the households monthly per capita income (Table 1), which is less in case of many dependents.

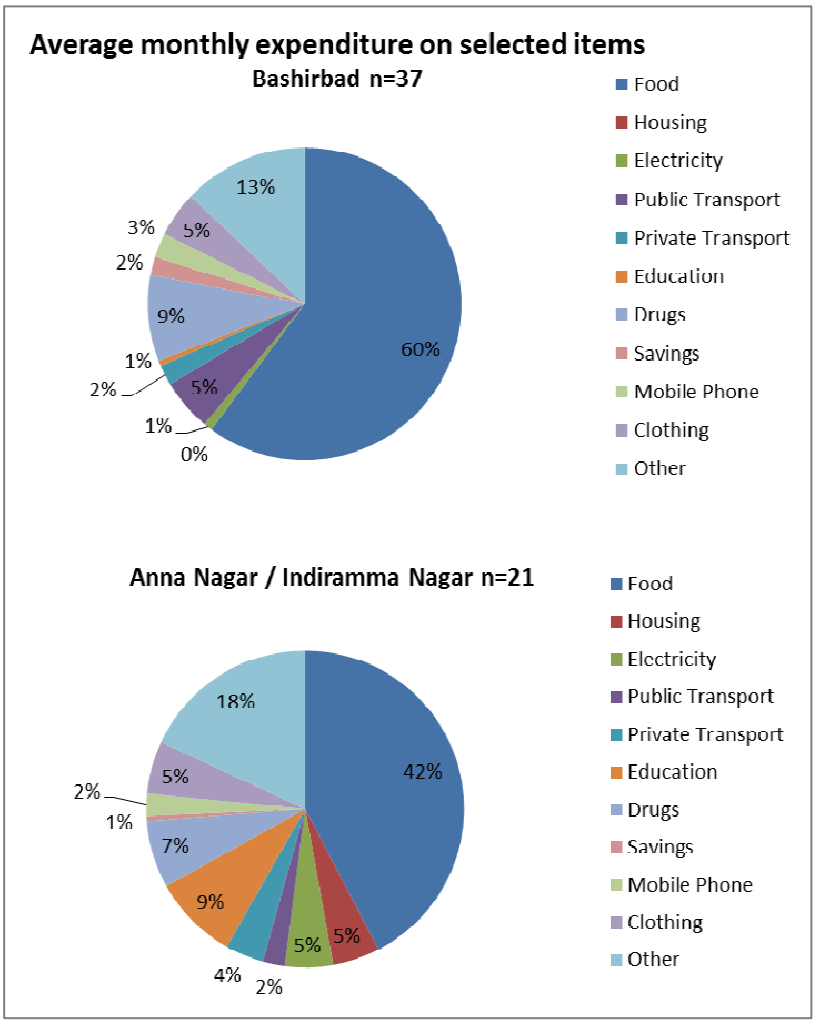
A male daily wage laborer often earns between 4000 Rupees and 5000 Rupees a month whereas a female daily wage laborer often only earns up to 3000 Rupees. The stated higher average per capita income in Bashirbad seems to be implausible due to the living conditions which are much simpler than in Anna Nagar/ Indiramma Nagar, and it was assumed that additional income would be used for improvements in the living situation, but there are possible explanations. On the one hand it may be related to higher rates of women who are engaged in paid labor than in Anna Nagar/ Indiramma Nagar, on the other hand in many interviews in Bashirbad the answers regarding financial assets and expenditure were often extremely incongruent with each other and it is believed that the actual monthly income is much less than the given data.

Another factor which influences the income and expenditure pattern of the households is the mode of employment of the household's wage earners. Nearly all wage earners in Bashirbad are employed on a day-by-day basis on construction sites, their employment is not guaranteed for the next day and their payment often not given immediately. Due to this, the chances for future planning and future-oriented investments are scant. In Anna Nagar/ Indiramma Nagar the majority of wage earners are employed with longer lasting agreements and their employment situation is much more secured than in Bashirbad area. Most earners in Anna Nagar/ Indiramma Nagar receive salary at a monthly or weekly basis and therefore in these households there is a higher financial security which allows for investments because it is assured in most cases that the employment of the earners will continue.

To get a better estimation of the household's financial situation the monthly expenditure for selected items was collected to see which items form the bulk of expenditure and to further assess if the household's income and expenditure patterns are balanced or if a gap can be found. It can be observed that the average expenditures for food items are much higher in Bashirbad which may be related to the fact that the majority of settlers in this area is not in possession of ration cards for Hyderabad and therefore cannot benefit from subsidized food grains in the Fair Price Shops. Furthermore most of the people in Bashirbad do not have the financial means and secured storage facilities to be able to buy items in bulk to benefit from lesser per unit rates. They have to buy food items on a daily base and therefore have to spend higher amounts than the people in Anna Nagar/ Indiramma Nagar. On the other hand the ex-

penditures for housing and electricity do nearly not exist in Bashirbad which makes it possible to divert this money to other purposes.

Higher expenditures for education in Anna Nagar/ Indiramma Nagar are based on the fact that most children there attend private schools which require school fees whereas the children in Bashirbad area attend government schools that provide education free of cost and also deliver a free midday meal to the children. Whether this school attendance pattern is shaped by the unavailability of government schools in Anna Nagar/ Indiramma Nagar or by a higher consciousness of the quality of education needs to be further evaluated. On the first view the average expenditures in both areas seem to paint a picture of households which can manage quite well to supply themselves with necessary commodities and still have 13% or 18% of their income left to spend for different needs. But with a closer look on the individual household or on the quality and quantity of goods which can be afforded, this picture turns. Especially in regards to food it needs to be further evaluated which level of nutritional supply can be managed with these already high expenditures. There are households in which more than 40 to 50% of the monthly income is spend on alcohol and other intoxicants, many households have to manage with a high debt burden and increasing interest rates. It is seldom possible for them to save for times of need and in many cases, especially in the Bashirbad area an unsustainable expenditure pattern could be observed and verified in the open interviews which is described later on.



Graphic 1: Average monthly expenditure on selected items

Difference income/ expenditure	Bashirbad (n=36)		Anna Nagar/ Indiramma Nagar (n=21)	
– 6000 to – 4000 Rs.	1	3%	-	-
– 4000 to – 2000 Rs.	1	3%	3	14%
– 2000 to 0 Rs.	8	22%	3	14%
0 to 2000 Rs.	12	32%	8	38%
2000 to 4000 Rs.	10	27%	5	24%
More than 4000 Rs.	4	11%	2	10%

Table 2: Difference between household income and expenditure

The collected income and expenditure data are compared with each other and the monthly difference is calculated. Here it needs to be kept in mind that not all possible reasons for expenditure were included in the assessment and that it can be assumed that the actual monthly expenditure is even higher than the given amount. In case of Bashirbad one household was excluded from his calculation due to missing information on its expenditures. Here it can be observed that the majority of households are located within the range of minus 2000 to plus 2000 Rupees, in case of the extreme positive amounts of more than plus 4000 Rupees monthly it can be doubted that this is true in most cases and that debts caused by marriages, illnesses or investments would lead to lesser surplus. From the open interviews and from the following investigation into special expenditures in 2010 it can be assumed that the average household spends at least 1000 to 2000 Rupees on a monthly basis for debt repayment and is often trapped in a circle of taking new loans with different money lenders to pay back the existing debts. In the extreme cases the monthly income directly goes into repayment and the survival depends on newly lent money. Most households manage their living with an extremely tensed budged and unforeseen, even only slight changes in their income or expenditure can lead to extreme financial problems which often directly affect nutrition, health and education opportunities.

Within the special expenditures costs for marriages and medical treatments form the bulk of expenses. For marriages often sums of more than 100000 Rupees are spent which leads to years of indebtedness, but this expenditure can at least be foreseen and if possible its effects can be alleviated whereas medical treatments and costs for deceased (like burial/ cremation and religious functions) come unexpected and further often bereave the household of sources of income which further aggravates the situation. In Anna Nagar/ Indiramma Nagar nearly all households had special expenditures in 2010 whereas in Bashirbad only three-quarters mentioned those and the average expenditure there was less than half of that in Anna Nagar/ Indiramma Nagar, which can be interpreted as a sign of the better or improved living conditions

in Anna Nagar/ Indiramma Nagar where the people are more willing or able to spend for special occasions.

	Bashirbad (n=37)		Anna Nagar/ Indiramma Nagar (n=21)	
Special expenditure in 2010				
Yes	28	76%	20	95%
No	9	24%	1	5%
Among those with a special expenditure:				
Average expenditure	23768 Rupees		48440 Rupees	
Reason of expenditure (amount per item not measured)		(n=28)		(n=20)
medical treatment	18	64%	8	40%
marriage	5	18%	4	20%
housing	-	-	6	30%
expired relative	3	11%	-	-
functions/ religious ceremonies	3	11%	3	15%
transportation	2	7%	-	-
relative visit	1	4%	-	-
education fees	-	-	2	10%

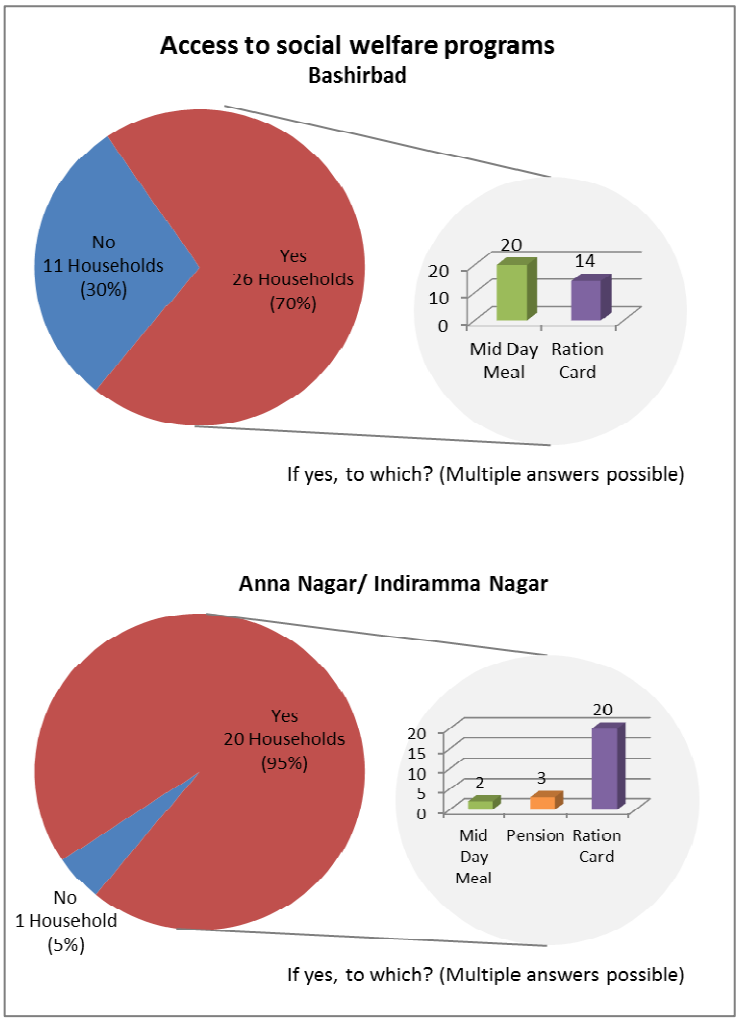
Table 3: Special expenditure in 2010

Further it can be observed that in Anna Nagar/ Indiramma Nagar the percentage of medical expenditures is about one-quarter less than in Bashirbad, in addition only in Anna Nagar/ Indiramma Nagar expenditures for the improvement of housing (30%) and education (10%) could be observed which can again be understood as a hint towards the improved living conditions in Anna Nagar/ Indiramma Nagar where expenditures for these purposes are made possible. But it needs to be kept in mind that the bulk of money is spent on marriages and medical treatment in both cases, the expenditures for housing and education are much less.

Another important determinant of household expenditures is the access to social schemes and benefits of governmental poverty alleviation programs which can ease the household's expenditures considerably. In Anna Nagar/ Indiramma Nagar only one interviewed household mentioned that its members have no access to any governmental scheme compared to eleven households in Bashirbad. There, 70% mentioned that they have access to schemes but this information needs to be treated with caution. In Bashirbad 14 households mentioned that they are in possession of ration cards but nearly all of them are not able to use these in Hyderabad. They are in possession of ration cards from their home villages and can only use them there. Due to their not legalized living situation they are not officially recognized as living within

the jurisdiction of Hyderabad, officially they do not exist and therefore cannot access governmental schemes. Most children within Bashirbad attend a government aided NGO run school where they receive a free midday meal which eases the household's financial situation a little.

In Anna Nagar/ Indiramma Nagar 20 out of 21 households had access to ration cards and were able to make frequent use of them. Due to their recognized living status some households also received old age or widow pension, but most of the eligible households still did not receive pensions, in most cases denied by the authorities due to missing formal age proof or the like. In Anna Nagar/ Indiramma Nagar most children of the questioned households attended private schools due to an ascribed better quality of education or were enrolled in government schools above primary level (the midday meal is only provided for children in primary school up to eighth grade). Other programs like the ICDS are existing in Anna Nagar/Indiramma Nagar but they were not mentioned by the questioned households, in most cases their children were above the age of six which made them eligible for the ICDS program and on the other hand there were various problems in the function of the ICDS in Anna Nagar/Indiramma Nagar which are described later on.



Graphic 2: Access to social welfare programs

2.3.2 Nutrition

To assess the nutritional situation of the households it was asked how often certain food items were consumed within a week. From this information first conclusions could be made regarding the existence of mal- and under-nutrition or even hunger which was later on consolidated by the open interviews and by comparison with information regarding health. It needs to be kept in mind that in the questionnaires no information regarding the quantity of consumed food was collected. It was only asked how often a certain item was consumed within a week, not how much of this item was consumed each time. This means that even if an item is consumed on a daily basis it does not necessarily mean that sufficient amounts of this item are consumed if compared with nutritional guidelines. The amount of consumption was assessed in the open interviews and by observations and this information needs to be combined to understand the nutritional situation of the households.

Besides the depicted items in graphic 3 the consumption of rice, cooking oil and spices like chili and salt was also queried but was not included into the graphic because all three items were consumed in both settlements on a daily base. Rice, as the main staple food and the most prominent source of calories and carbohydrates is often eaten two or three times a day. It can be assumed that enough rice in regards to quantity is available to the majority of households due to its frequent availability in the Fair Price Shops and on the open market. The quality of the available rice is another issue; especially the rice available in PDS is of extremely poor quality and contains many stones, insects and other impurities. The quality of food which is consumed and affordable as well as the household's perception of its nutritional situation is investigated in the open interviews. In addition the influence of cooking oil and spices on nutrition are marginal, they are more consumed to add taste to food items and not because of their nutritional properties. This fact can start to create nutritional problems when spices, cheap oils or pickles are used as substitutes for vegetables or other meal components to make the leftover staples edible, which unfortunately could be observed quite often. The direct comparison of the frequency of consumption of certain items shows differences between Bashirbad and Anna Nagar/Indiramma Nagar but only a few shall be described in detail.

In Bashirbad animal products like eggs, meat and fish are consumed more often than in Anna Nagar/ Indiramma Nagar, but this does not necessarily imply that their diet contains more proteins. Instead, it could often be observed that the desire to consume higher priced animal products at least once a week made it necessary to compromise with food expenditures on other days. It can be observed that in Bashirbad nearly all items, besides animal products, are

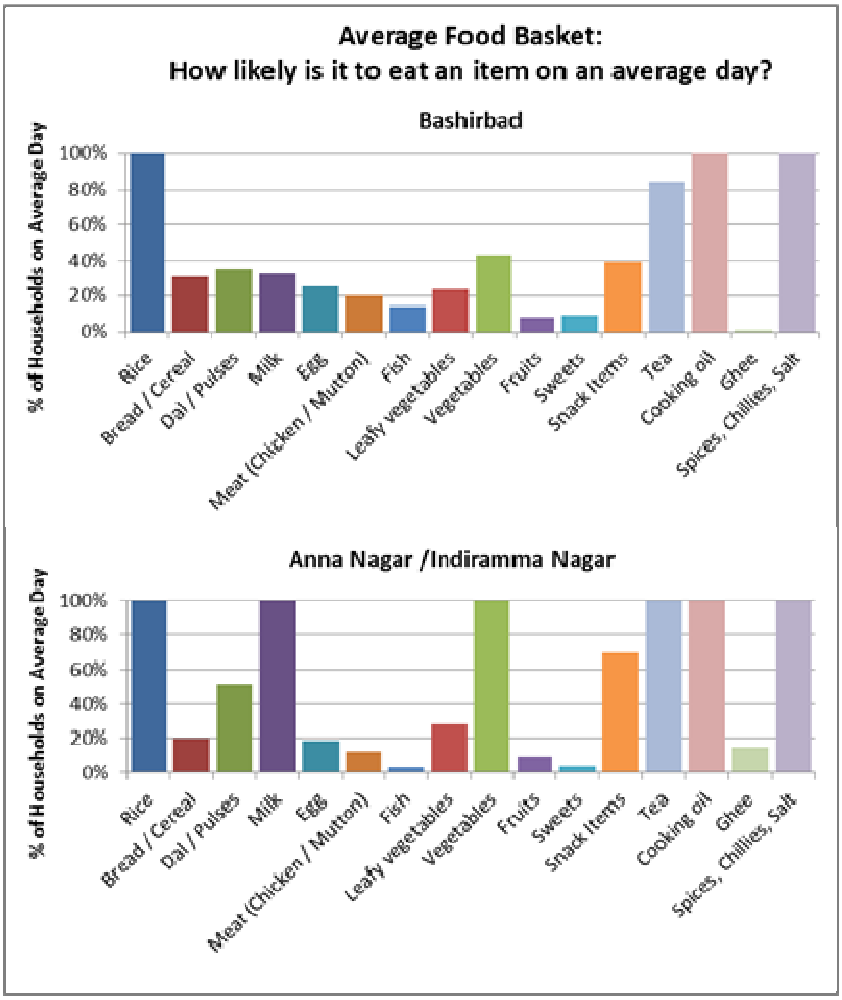
consumed with lesser frequency than in Anna Nagar/ Indiramma Nagar; especially the rates of items that are never consumed are considerably higher in Bashirbad.

This divergence is highest in case of fruits and milk. Milk is consumed in Anna Nagar/ Indiramma Nagar on a daily basis whereas milk was never consumed in more than 50% of the households in Bashirbad. Here it needs to be mentioned that the consumption of milk in Anna Nagar/ Indiramma Nagar is mostly restricted to the use in tea for adults, but most children get to drink milk regularly, furthermore other milk products like curd are consumed frequently in summer. Another large difference can be observed in the case of vegetables and dal/ pulses. Vegetables were consumed in Anna Nagar/ Indiramma Nagar on a daily basis, in Bashirbad not a single household consumed vegetables that often, more than 50% of households con-

Graphic 3: How often are certain food items consumed within a week?

sumed vegetables only every three to four days. In regards to dal and pulses the difference in consumption is not as high but still visible. Besides animal products dal/ pulses are the major source of protein and especially in a predominately vegetarian food pattern these sources of protein gain increasing importance, especially in cases when even milk is consumed less. Therefore the combined nutritional pattern in Anna Nagar/ Indiramma Nagar can be described as more balanced and diverse than the nutritional pattern in Bashirbad.

To get a better overview of the average daily consumption in both areas, an average food basket was calculated based on the consumption pattern assessed in the questionnaires. Graphic 4 shows the percentage of households eating a certain item, weighted by the frequency of consumption. For example, if an item was consumed every second day, it would contribute with a weight of 0.5. From this calculation one can assess the importance of individual food items for the nutrition of the average household. The Graphic can be interpreted as showing how likely it is that an average household is consuming a certain item on an average day. This graphic can be used as a clarification of the previously observed nutritional patterns and makes the differences in the average nutritional situation in the two settlements even more visible than graphic 3. Weighted like this the differences in consumption of animal products are not as pronounced as it seemed in the previous observation but it is slightly visible that higher rates of animal products are consumed in Bashirbad. But much more important is that this graphic makes it easier to assess the composition of daily meals and shows that



Graphic 4: Average Food Basket: How likely is it to eat an item on an average day?

the food basket in Anna Nagar/ Indiramma Nagar is more diverse than in Bashirbad.

According to this data, the nutritional situation in Anna Nagar/ Indiramma Nagar appears to be much better than in Bashirbad. This could be confirmed by further open interviews and additional questionnaires. When questioned about the quality and quantity of food items which are consumed nearly all households mentioned that they started to cut down in quality and quantity in the last years due to rising prices. Even if it was mentioned that they consume vegetables or dal/ pulses on a daily basis or quite often; in most cases this only meant small amounts of those items. Thin soup-like dal or vegetable based dishes were prepared to make the rice go further; vegetables and pulses are threated more like a spice than an equal meal component. For example it was mentioned that for a household of four people they use ¼ kg of tomatoes a day as the sole vegetable (P. La 15.10.2011). In most cases only the cheaper kinds of vegetables like tomato, onion, eggplant or potato are used or items of lesser quality or lesser freshness which are available at cheaper rates. Similar things can be observed in case of rice, pulses and grains. Here also mostly the cheaper qualities are bought to manage with limited funds, but these are often less nutritious, or polluted. Nearly all meal items are cut down in quality and quantity simultaneously. It is often the last step to cut down in the quantity of rice consumption whereas its quality is compromised much earlier. The importance of rice as the main staple has risen considerably and as long as "enough" rice is available to fill the stomach in most cases the individual's perception of its nutritional situation is much too positive. This interesting fact could be observed especially in Bashirbad were it got visible in the open interviews that the knowledge about bodily requirements was much less than in Anna Nagar/ Indiramma Nagar and more people mentioned that they were satisfied with their nutritional situation. In Anna Nagar/ Indiramma Nagar instead it could more often be observed that people were worried about the quality and quantity of the food items which were affordable for them. Here discontent with the food available in PDS, ICDS and midday mealMeal Schemes could be observed, people worried about pesticides and chemical pollution of food and were much more aware of bodily requirements and the link between health and nutrition. These aspects are further described in the following chapters.

Other important influencing factors on the households or individuals nutritional situation are the number of square meals and the way the food is distributed within the household. When comparing the number of square meals it can be observed that in Anna Nagar/ Indiramma Nagar only 43% of the households had three square meals a day compared with 97% in Bashirbad. At first sight that may lead to the conclusion that therefore in Anna Nagar/ Indiramma Nagar lesser amounts of food items are consumed within a day but this does not

need to be the case. Two square meals, if distributed equally throughout the day and compounded by different food items can supply a body with all required nutrients. The number of daily meals alone does not provide enough information, the total amount out of which the daily meals are constituted is much more important. The number of meals only starts to reflect problems if previously consumed meals or components are skipped and therefore the total daily consumption is reduced.

To assess these aspects it was asked if members of the household stay hungry after the meal is eaten, which would be a sign that the quantity of food items available would not be sufficient for all household members. Here it needs to be kept in mind that the individual's perception of hunger may be different from the objective existence of hunger as it was described in chapter 1.3. It could be observed that in Anna Nagar/ Indiramma Nagar, even if only 43% of the households mentioned to take three square meals a day no household admitted that members stayed hungry after the meals were consumed. In Bashirbad instead only 35% of the households had the same impression, here in more than 50% of the households it was stated that children stay hungry.

	Bashirbad		**Anna Nagar/ Indiramma Nagar**	
How many square meals do you have a day?	Households (n=37)		Households (n=21)	
Two	1	3%	12	57%
Three	37	97%	9	43%
Who eats first?				
Men	2	5%	11	52%
Women	-	-	1	5%
Children	7	19%	2	10%
All together	28	76%	6	29%
Other	-	-	1	5%
			Whoever is hungry	
Who stays hungry after taking food?				
Nobody	13	35%	21	100%
Everybody	1	3%	-	-
Children	19	51%	-	-
Elderly	3	8%	-	-
Refuse	1	3%	-	-
Other possible answers: Women, Men				

Table 4: Meal consumption and distribution

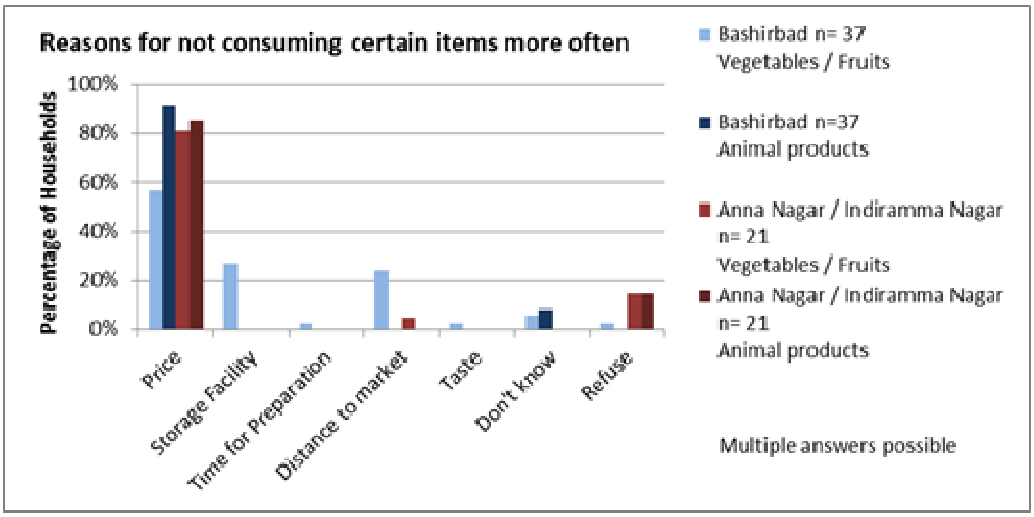
This is a very worrying statement because especially children are very vulnerable towards insufficient nutritional supply which can affect their further development considerably.

The distribution of food within the household was questioned to check if relations could be found between the persons who stay hungry and those who get served first. In case of Anna Nagar/ Indiramma Nagar a high differentiation between persons who are served first could be observed, with a distinct privilege given towards the males. By contrast in Bashirbad the majority of households stated that they eat food all together. Here it is interesting to observe that the 19% of households who mention to serve first to the children are nevertheless nearly completely among those who mention that children stay hungry. This information confirms that in case of Bashirbad the nutritional situation is much more tensioned than in Anna Nagar/ Indiramma Nagar. Even there individual households face increasing difficulties but the level on which these manifest is different nevertheless the situation is worsening as compared to previous years.

	Bashirbad (n=37)		**Anna Nagar/ Indiramma Nagar (n=21)**	
Do you manage to supply your family with sufficient variety and quality of food throughout the year?				
Yes, all the time	19	51%	13	62%
No, never	-	-	1	5%
Only sometimes	18	49%	7	33%
If only sometimes, in which season(s) do you have problems? (multiple possible)				
Winter	-	-	1	5%
Summer	-	-	2	10%
Monsoon	5	14%	1	5%
No specific season	13	35%	4	19%

Table 5: Seasonality in food supply

Seasonal differences in income opportunities and market availability can influence the nutritional situation of households considerably. Especially for those employed as daily wage laborers in the construction sector it is very difficult to find employment during the monsoon



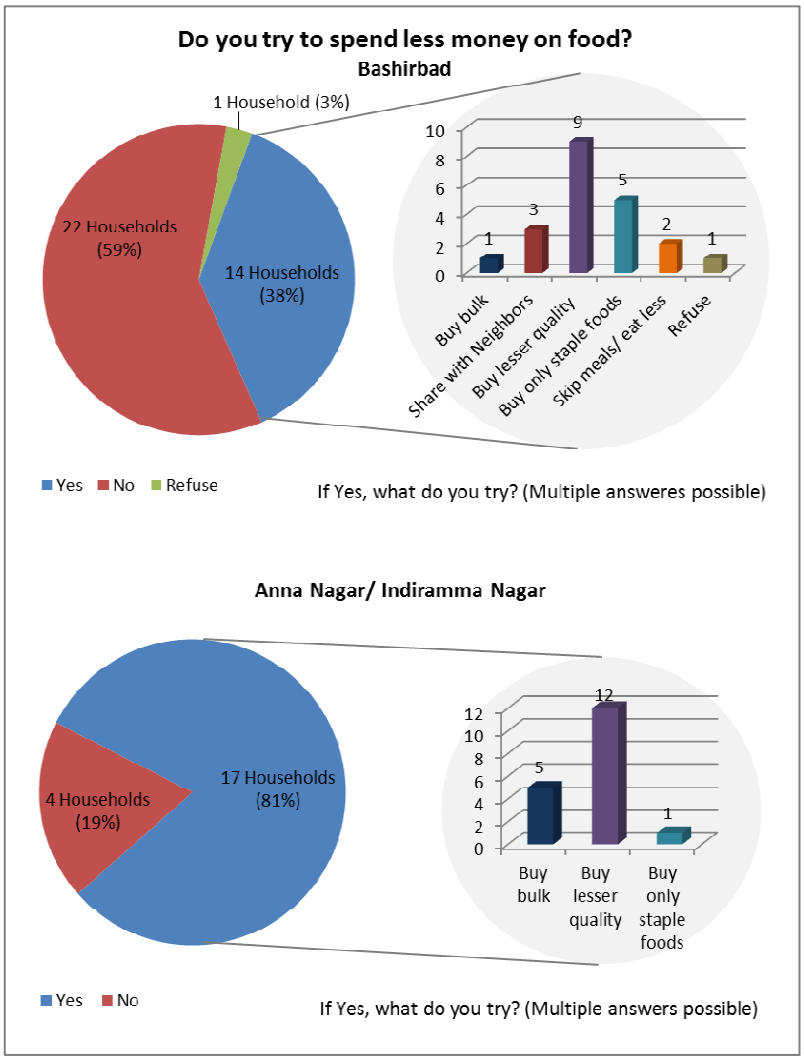
Graphic 5: Reasons for not consuming certain items more often

season. During monsoon, the household's budget is often even more stressed by medical expenses caused by the environmental conditions and by higher food prices at the end of the agricultural year. It could be confirmed that in most cases the monsoon season is the most difficult time of the year in regards to income, health and food availability. If asked about the ability to supply the household with sufficient food items throughout the year, the majority of households mentioned that they can supply themselves with sufficient quality and quantity throughout the year. Here again it needs to be constrained that the individuals perception of "sufficiency" does not necessarily be congruent with nutritional guidelines and that people can regard conditions as sufficient which should be called insufficient by scientific observations.

It needs to be emphasized that in most households the determining factor for the frequency with which certain items are consumed is the price. Only in regards to fresh items like vegetables and fruits it was mentioned by around 20 % of households in Bashirbad that lacking storage facilities and the distance between their settlements and the market are also influencing factors. As it could be confirmed that the price of food items is the most prominent determining factor for the consumption of certain items, it was asked whether the household feels it is necessary to cut down in food expenses and therefore tries to spent smaller amounts on food items.

In Bashirbad the majority of households mentioned that they do not try to spend lesser amounts on food items. This can either be explained by their individual perception that they are managing quite well with their funds and they do not feel it necessary to cut down their expenses. On the other hand this can be a sign that there is no scope left for them to cut down from because they have already reached the minimum level. In Anna Nagar/ Indiramma Nagar more than 80% of households mention that they try to spend less on food items. The two most prominently used strategies in this regard are buying lesser quality goods and buying items on bulk with lesser per unit rates. The comparison between the strategies used in both areas is difficult because in Anna Nagar/ Indiramma Nagar the option to give multiple answers was not used but it would be possible, as it is visible in the answers from Bashirbad, that one household uses multiple strategies to spend less money. In comparison it can be observed that the strategies used in Anna Nagar/ Indiramma Nagar are still aimed to supply a more balanced diet than in Bashirbad. This means that even when it is tried to save money, strategies like the skipping of meals or the restriction towards staple foods like rice and grains could not be observed. This can be interpreted as a sign of the higher nutritional consciousness or a still better financial situation in Anna Nagar/ Indiramma Nagar, but these hints shall not be over interpreted. The high rates of household who try to cut down their food expenses, even if only on moderate terms shows that the financial situation of the households is extremely tense, because food is usually the last asset to be compromised because its immediate necessity for survival is obvious and it is only compromised if there are no other options left.

2.3.3 Consumer behavior



Graphic 6: Do you try to spend less money on food?

The consumer behavior and the market dependence of a household are closely linked to its nutritional situation and its strategies to supply itself with food items, including the previously mentioned attempts to spend lesser amounts of money on food. In Anna Nagar/ Indiramma Nagar the variety of market based food sources is much higher than in Bashirbad where only the kirana shop and bazars/ markets are used to buy food. In Anna Nagar/ Indiramma Nagar the most frequently used sources of food items are mobile street food vendors, the PDS and kirana shops. Further stationary street food vendors and bazars/ markets are also used but not as frequently. In Anna Nagar/ Indiramma Nagar, due to its better infrastructural endowment much more sources are accessible for households and allow for price comparisons and the like. Further, especially mobile street food vendors who come to the houses of the customers allow for time saving purchase and daily supply of goods. In addition bigger choices of market based food sources decrease the dependence from individual vendors which is very high in Bashirbad due to the unavailability of other markets in close proximity caused by the settlement's marginal status and its location in the outskirts. In accordance with the availability of different market based sources and the ability to buy items in bulk or in the PDS shops the frequency of purchase of selected items is different in both settlements. Fresh items are bought in Anna Nagar/ Indiramma Nagar on a daily basis by 90% of the households which can be explained on the one hand by problems to store the items properly and on the other hand by the daily availability of fresh goods in the close proximity.

	Bashirbad (n=37)		Anna Nagar / Indiramma Nagar (n=21)	
Where do you get your food from? (3 most frequent sources)				
Supermarket	-	-	1	5%
Kirana Shop	33	89%	17	81%
Street food vendor mobile	-	-	20	95%
Street food vendor stationary	-	-	5	24%
Bazar/ Market	26	70%	3	14%
PDS	-	-	19	90%
How often do you buy fresh/ perishable food items within a week?				
Every Day	11	30%	19	90%
3-4 times	7	19%	-	-
1-2 times	19	51%	2	10%
How often do you buy dry/ nonperishable food items within a week?				
Every Day	1	3%	-	-
1-2 times	28	76%	-	-
Less than weekly	-	-	2	10%
Monthly	8	22%	19	90%
Sufficient storage facilities in regards to size?				
Yes	22	59%	21	100%
No	15	41%	-	-
Sufficient storage facilities in regards to safety?				
Yes	11	30%	21	100%
No	26	70%	-	-

Table 6: Consumer behavior

In regards to perishable items the purchase in bulk is often not possible and not advisable if the safety and quality of the items shall be guaranteed. In Bashirbad on the other hand fresh items are bought less frequently, more than 50% only buy them one or two times a week which goes conform with the lesser frequency of vegetable consumption on the one hand and the previously mentioned distance to the markets on the other hand.

In regards to dry/ nonperishable food items like rice and pulses, 90% of the households in Anna Nagar/ Indiramma Nagar buy those items on a monthly basis which can be related to their access to the PDS shops and their ability to purchase their further needs in bulk. Even the remaining 10% of households purchase these items less then weekly which means they are still able to benefit from bulk rates. This ability goes hand in hand with the household's positive assessment of their storage facilities and their safety. In Anna Nagar/ Indiramma Nagar all households were satisfied with the size and safety of their storage facilities which can be explained with a quite well developed housing situation with weatherproof houses with often separated kitchen facilities. In Bashirbad the majority of households purchase their provisions of nonperishable items on a weekly basis, only around 20% are able to do this on a monthly basis. This can either be explained by their frequent inability to purchase items on bulk caused by the unavailability of ration cards for Hyderabad, the lack of cash due to the common daily waged labor, or with problems related to proper storage of these items. More than 40% of households in Bashirbad mentioned that their storage facilities are not big enough and in 70% of the households problems regarding the safety of storage, in most cases caused by insects and rats, could be observed which can be directly linked with the undeveloped living conditions in this area.

Besides market there are various other sources which could be used to supply oneself with

	Bashirbad (n=37)		**Anna Nagar/ Indiramma Nagar (n=21)**	
What other sources (besides market) do you use to get food? (Multiple answers possible)				
None	2	5%	20	95%
Own Production	2	5%	1	5%
Temple	26	70%	-	-
Neighbors	28	76%	-	-
Midday Meal	20	54%	1	5%
Family functions	2	5%	-	-
What sources can you rely on when you run out of money?				
None	-	-	1	5%
Family	22	59%	1	5%
Friends	18	49%	-	-
Neighbors	17	46%	-	-
Government Scheme	-	-	1	5%
Money Lender	19	51%	19	90%
Owner at work	2	5%	-	-

Other possible answers: Savings and Credit, Religious community

Table 7: Non market sources of food and financial assistance

additional food items and ease the vulnerability towards price fluctuations or the dependence from individual vendors. Table 7 shows which non market sources are used by the households to increase the food supply as well as the persons or institutions the household can rely on when money or food provisions are exhausted. In these two questions the previously mentioned problems in the evaluation of questions allowing for multiple answers gets visible. In case of Anna Nagar/ Indiramma Nagar only one household gave more than one answer in both questions but it is extremely unlikely that only one source would be used in reality. In case of the first question asking for non- market sources of food it seems unlikely that 95% of the households in Anna Nagar/ Indiramma Nagar mention that they do not use any non-market sources (in the table only the mentioned sources are depicted, it was asked for many more).

In case of the second question asking for emergency assistance in regards to money or food it is assumed that most households in Anna Nagar/ Indiramma Nagar only gave the most frequently used or important source and did not include minor sources. It seems unlikely that in a well-established community with neighborhood networks and women's groups 90% of households mentioned the money lender as their only supply of financial assistance and other options like family, friends, neighbors or saving, which are an integral part of the women's group activities, are not mentioned.

Therefore it needs to be considered that in Anna Nagar/ Indiramma Nagar, even if not mentioned in the questionnaires, well developed social networks are existing which has been confirmed in the open interviews. The answers in Bashirbad area, especially those concerning social networks, show a distribution pattern which was expected for Anna Nagar/ Indiramma Nagar. Due to the short duration of settlement in this area it was not expected that the importance of family, friends or neighbors was so pronounced and equal to the importance of the money lender. The importance of neighborhood solidarity is further highlighted in the first question were 76% of households mention that they can rely on their neighbors to acquire food items. Other important non market sources of food items were the midday meal which was used in more than half of the households as well as food provided in temples (including churches and mosques) which was used in 70% of households. According to these answers it can be assumed that even in settlements which have been founded only some years ago and in which a high fluctuation of the inhabitants can be observed informal social networks of family or neighborhood solidarity can be observed which help to cushion short time difficulties in monetary or food supply. From the open interviews in Anna Nagar/ Indiramma Nagar it could

be assessed that there these informal networks also exist but in addition there are more formalized self-help groups like women's groups which do not exist in the quite recently established settlement of Bashirbad. It can be assumed that informal neighborhood assistance can be established quite soon after the development of a settlement when, promoted by shared difficulties a relation based on mutual trust or dependence is formed. For the development of more formalized social security systems it seems that longer periods are needed to form them. The assumption, that the households in Bashirbad are less able to buffer (individual) short time changes in income or food supply by the use of informal social networks, could not be validated in this sample. But it can be stated that the households in Bashirbad face higher tensions in regards to their livelihood security than the households in Anna Nagar/ Indiramma Nagar.

2.3.4 Health

Besides general nutritional supply and food preparation hygiene the living environment, especially the access to sanitation facilities and safe drinking water influences the health situation in a considerable amount. In Bashirbad not a single household had access to sanitation facilities, they had to use the open fields which can enhance the spread of diseases and is known to create problems especially for women who try to avoid defecation during daylight hours by drinking less which leads to dehydration, inflammation of the bladder and the like. In Anna Nagar/ Indiramma Nagar all household had access to sanitation facilities, whereas 95% of households had their own private facilities and one household shared facilities with the neighbors. Access to private sanitation facilities enhances the quality of living considerably and allows for improved personal hygiene and can reduce the spread of communicable diseases.

The drinking water is not secure in both areas and only sometimes means of water purification are applied. In Anna Nagar/ Indiramma Nagar 24% of the household mentioned that they try to purify the water but most households only used a cloth to filter visible impurities, which does not affect the microbiological contents. Only in two households the drinking water for all members was boiled before consumption, some households mentioned that they boil the water they give to infants but those were not included in the table.

	Bashirbad (n=37)		Anna Nagar/ Indiramma Nagar (n=21)	
Access to sanitation facilities				
Yes	-	-	20	95%
No	37	100%	-	-
Shared	-	-	1	5%
Source of drinking water (multiple answers possible)				
Tap Water	-	-	5	24%
Tanker	-	-	16	76%
Bore Well	37	100%	-	-
Buying from outside	2	5%	-	-
Means of water purification				
None	35	95%	18	86%
Boil	2	5%	2	10%
Filter with cloth	-	-	3	14%

Table 8: Sanitation facilities and access to drinking water

Knowledge about the deficient water quality and the means of water purification was available in most households and most households mentioned that they would purify the water if they had the financial means available to afford filters or additional fuels. The majority received their drinking water through water tankers provided by cantonment board every two or three days which is hardly sufficient. The water provided by cantonment board is purified river water, but due to the long storage time it gets contaminated again. In the open interviews many households mentioned that they use additional bore water for laundry and other cleaning purposes, but this they would not use as drinking water due to its bad taste (Re 15.10.2011). The bore water is very salty and contains extremely high amounts of soluble minerals. In regards to microbiological safety both water sources can be compared and are equally unsafe. In Bashirbad the major source of water are bore wells in the close proximity, only two households mention that they sometimes buy water when the quality or quantity of the bore water supply is not sufficient. The frequency of water purification is less and it could also be observed that the awareness about water safety was lower than in Anna Nagar/ Indiramma Nagar, the only reasons for complaints about the water quality was the salty taste of the water not the microbiological contents. Further it could be observed that the quantity of water available for the households was often much less than in Anna Nagar/ Indiramma Nagar due to the distance of the bore well from were the water needs to be fetched, so that often only the minimum requirements are fulfilled.

To assess the health situation of the household members it was asked if anyone is suffering from any health problems. Here it needs to be kept in mind again that the individual's perception of health and illness may be different from an objective assessment and that situations

which would be classified as disease or health problem are considered to be normal. In both areas in approximately half of the household health problems of the members were mentioned whereas a slightly higher percentage of households in Bashirbad mentioned that they had expenses for medical treatments in 2010. The average expenditure for medical treatment in Bashirbad was approximately 2/3 of that in Anna Nagar/ Indiramma Nagar which can be interpreted in various ways. It seems very unlikely that the people in Bashirbad suffer from less severe problems than in Anna Nagar/ Indiramma Nagar, it is rather assumed that either their financial means are more restricted or that they receive cheaper treatment. It is possible that in Anna Nagar/ Indiramma Nagar due to its proximity to the city center and the better developed infrastructure more health facilities and medical shops are available which would also explain higher expenditures. On average the given answers seem to indicate a quite similar health situation in both areas but it is assumed that in Bashirbad area a much higher amount of chronic problems which are not recognized as in need of treatment are existing due to the deficient living conditions. A factor accounting for huge parts of the medical expenses are deliveries in hospitals which were mentioned five times, but this can not be directly included in an assessment of existing health problems.

	Bashirbad (n=37)		**Anna Nagar/ Indiramma Nagar (n=21)**	
Do you have any health problems?				
Yes	19	51%	10	48%
No	18	49%	11	52%
Did you have expenses for health in 2010?				
Yes	16	43%	8	38%
No	21	57%	13	62%
Average expenditure	13500 Rupees		20100 Rupees	

Table 9: Health problems and expenses

It was tried to collect the different health problems, compare them between the two settlements and connect them with possible causes, both in the individual's perception and also in medical terms. This was not possible due to the huge number of different problems which were mentioned in both areas. Further in most cases only the very severe illnesses, disabilities or pregnancy related problems were mentioned which are very hard to link with the living situation or nutritional supply. It was hoped to collect information which can be related to micronutrient deficiencies or food and water safety, at least as far this is possible without a medical analysis, but these health effects like gastro-intestinal problems and diarrhea, anemia, vision impairment, general weakness etc., were not mentioned in most cases. It is assumed that these health problems as well as low birth weights and stunned growth exist but were not

mentioned in most cases because they were not recognized as a mentionable health problem or that they were not mentioned because they were related to more private or intimate aspects of health. Problems like stomach pain, general weakness, problems with the legs and veins and general body pains were mentioned in more than one household and were explained by heavy work load or old age. Anemia and food poisoning were mentioned once and were the only two problems directly related with nutrition by the households. Most other stated problems were only mentioned one or two times and can therefore be regarded as more individualized problems which can not as easy be connected with the living situation. Of course even those are often aggravated by the lacking financial means to afford the required treatment but they are caused by the external circumstances to a lesser degree. These problems or diseases were deaf-muteness, heart problems, tumors, fever, urine problems (inflammation of the bladder), fever, sugar and high blood pressure, vocal infections and polio.

To get a more objective assessment of the existing health problems in Anna Nagar/ Indiramma Nagar a worker in the urban health center, a local doctor and a medical shop owner were interviewed. Their assessment of the problems existing in Anna Nagar/ Indiramma Nagar paints a different picture of the general health situation than the questionnaire based study showed where; especially in case of Anna Nagar/ Indiramma Nagar only few problems were mentioned. Dr. Subramanyan from Pawan Sai Clinic in Indiramma Nagar observes a high occurrence of seasonal diseases like colds and coughs as well as malaria or typhus. Further gastro-intestinal problems or skin infections are common and mostly attributed to the general weak immune power. Most children are suffering from vitamin deficiencies and nearly all women are anemic. A high rate of HIV and other sexually transmitted diseases could be observed which he also links with the weak immune power. He states that the weak immune power, which is causes by inadequate calorie and nutrient supply as well as general unhygienic living conditions, is one of the major problems due to which people get easily infected by diseases which also get more severe and per-

Box 4: The Urban Health Centre

The Urban Health Centre in Indiramma Nagar is staffed with five people who are one doctor, a pharmacist, two auxiliary nursing mothers, who are nurses with surgical knowledge and one community organizer who mostly does educational home visits. This urban health center serves a population of 20000 people which is not at all sufficient. The closest government hospital is about 10 km away, in the closer proximity only private hospitals or small medical clinics can be found. The major focus of this center is the care for pregnant women, the distribution of medicine and nutritional supplements as well as small scale health education. They conduct educational meetings for pregnant women in cooperation with the ICDS where the women learn about nutrition and health care issues. The Urban health center is opened daily until 2 pm (Ka 08.10.2011).

sistent. In his observation the patients awareness about nutrition and medication is lacking a lot and the patients are either unwilling or unable to change their daily routine towards a more healthy one which targets the causes of the problems and not only the symptoms (Dr. Subramanyan 15.10.2011). From the patients point of view it could be assessed through further interviews that especially in Anna Nagar/ Indiramma Nagar theoretical awareness about health and nutrition is existing but either the financial means are lacking to apply this knowledge or it is just not known how to implement it into the daily routine. From the urban health center it was stated that especially children are facing many problems related to nutrition, many are stunned in their growth and their development is delayed. Night blindness caused by a lack of vitamin A intake is very common as well as iron deficiency anemia. Many persons suffer from water borne diseases which affect the gastro-intestinal system due to the bad quality of the available drinking water. Especially during monsoon season, when the environmental and hygienic conditions are worst due to frequent flooding of sewage systems and the like, mosquito or other insect transmitted diseases like malaria, dengue, chikungunya or elephantiasis/filaria are quite common (Ka 08.10.2011). In the medical shop the bestselling items are pain killers and nutritional supplements, especially minerals and vitamins. Nutritional supplements which are prescribed quite frequently are on the long run much more expensive than slight changes in the nutritional pattern would be. But changes in the nutritional pattern would mean higher daily expenses and the long term benefit is often difficult to convey to the households.

2.4 Individual problem perception

In the following chapter the individual's problem perception and situational assessment as extracted out of the open interviews is portrayed and connected with the information generated in the questionnaire based survey. Only people from Indiramma Nagar and NCL Colony in Bashirbad were interviewed further. From these interviews a higher focus is given to people from Indiramma Nagar because there more interviews could be conducted and in addition the awareness about problems regarding health and nutrition as well as economic impacts was much higher than in Bashirbad area. The five interviews conducted in Bashirbad are not discarded but will only be used to emphasize differences and are not evaluated in detail.

2.4.1 Economics and Infrastructure

In Anna Nagar/ Indiramma Nagar it is often stated that in the last 15 to 20 years many changes in regards to infrastructure development like the construction of roads, houses, electricity and the like took place and that the settlement security and also the economic conditions on average improved a lot. The prices for nearly all commodities and services have increased considerably, but especially the rise in food prices often creates problems. Further it is often stated that many households apply unsustainable economic actions, either because they have no other choice or because they do not know enough about financial planning for example. Many people mention that others face a lot of problems because they do not save money for times of need, they often tent to spend every surplus immediately and take loans in case of unforeseen or special needs. It could be observed that in the past loans were mostly taken for needs inevitable for survival like medical treatment, housing or also education. Nowadays often modern amenities like mobile phones, private transport or television are desired and loans are taken for these items which can be viewed as a surplus, but these loans start to affect the immediate needs like nutrition on the long run through debt repayment. In addition in many households' problems of alcohol abuse or addiction to other drugs can be found which require considerable amounts of money, often lead to indebtedness and put the households financial and nutritional situation as well as its social security in danger.

In Anna Nagar/ Indiramma Nagar various kirana shops are scattered throughout the area that provide the settlement with all goods of daily needs from food items to cosmetics and cleaning utensils. The shop owners observed some changes in the consumer behavior in the last years. The demand for modern processed foods and snack items has increased a lot but they still sell mostly staple foods and vegetables. The consumers have started to demand a higher variety of goods to choose from and especially in regards to snack items the demand for branded items known from advertisements has increased a lot, for example small packages of Maggi noodles are sold at 5 Rupees per piece. Most kirana shops have regular customers who are well known to the vendor and who can purchase on credit if they need to. Most shop owners mention that they sell on credit to those customers from whom they know that they will pay back the credit. This credit is mostly given without interest because it is believed it will increase their sales nonetheless. Sale on credit bears benefits for both, the vendor and the customer, in case of the vendor it increases his sales and in case of the customer it can be used as an emergency security and a means to buffer short time lacks of money. This kind of sale on

credit can only be found in well-established communities where mutual trust and a certain amount of financial security can be found.

In Bashirbad area the people had no access to food purchase on credit or if they have, only with high interest rates which make it much more difficult to buffer short time lacks of food or income by purchase on credit. In Bashirbad most households have high debts and an unsecured daily wage occupation, therefore have to manage with extremely limited financial means. But on the other hand the average income is not so different in both areas; the extreme differences in nutritional intake have to be explained by other means. It is a circle of indebtedness and lacking knowledge and education about economics and how to run a domestic economy. This can be found in unsustainable expenditure patters like drug or alcohol addiction or immediate spending on luxurious items like meat or television which again lead to indebtedness. This circle needs to be broken which only seems to be able trough education and the existence of future prospects for motivation. The example of the area guide for Bashirbad who works as an NGO teacher can be used to understand this aspect. Her family of four people manages with the same monthly income as most of the households in NCL Colony but they receive a secured monthly salary, are educated and conscious of nutrition. They manage to rent a small 2 room house and sent their children to private schools even with this limited funds, which she attributes to her knowledge of a successful domestic economy with a spending pattern which is adjusted to their income and the successful avoidance of indebtedness through small scale savings. This example shows that many of the problems found in Bashirbad as well as in Anna Nagar/ Indiramma Nagar can be attributed to expenditure problems which could be found in many households. Without those, the household's income would be sufficient in most cases to supply for a much more balanced diet and an improved nutritional and health situation. This problem cannot be addressed only by increased wages or other means of income generation, even if these would also benefit, it needs to be addressed by education and women's empowerment.

2.4.2 Nutrition and Health

But besides the often felt economic and infrastructural improvement with the building of a drainage and sewage system it is stated that due to overcrowding and unhealthy living conditions health problems occur more frequently and more severely than in the older days. Especially vector borne diseases like malaria and chikungunya are perceived to have increased considerably. This is also closely linked to the frequent opinion that the quality of food items

which are available in the market has decreased in the past years. Especially the older inhabitants state that, even if one pays the higher rates demanded for better quality goods, one does not get the quality of food they used to get in their childhood or some years back. It is often stated that in the last 15 years the amount and variety of food items available in Indiramma Nagar increased a lot, but the food is not "pure".

Especially vegetables and grains are perceived to be polluted with chemicals and pesticides, to even transmit diseases. Besides the ascribed loss in safety and nutritional properties it is often mentioned that the food items have lost their taste (Ro 08.10.2011). It is frequently requested that the government should control the production better and ensure that he food products are not contaminated with chemicals. Besides the quality of food available in the open market they also demand that the government takes actions to ensure that quality food is distributed in its schemes of poverty alleviation like PDS, ICDS and midday meal scheme as well as ensure that these schemes are properly implemented. At present the government provided food in the case of provisions as well as ready cooked meals is often considerably lacking in quality and safety. In combination with actions to assure food quality and attempts to spread knowledge about contamination and adulteration of food it is

Box 5: Anganwadi Center/ ICDS in Indiramma Nagar

In Indiramma Nagar there is one anganwadi center per 1200 people which makes it around 15 anganwadi centers. There they are supposed to distribute one boiled egg a day to pregnant women and eight boiled eggs a month and one banana weekly to children below five. In addition a protein powder and a vitamin B complex powder should be distributed to take home as well as a freshly cooked meal daily.

But there are lots of problems with the anganwadi centers in general. Often they are not properly equipped and staffed or the staff is not present. The anganwadi teacher is often not properly trained so the quality of education or health advice for children and adults is limited. The food which is distributed there is often told to be of bad quality and of little taste. Mostly it is rice with a liquid curry, the requirements of protein or vitamin content are often not met.

The anganwadi center which was designed to promote child development and assistance to women and children in regards to nutrition and health has failed to reach the general public, at least in case of Indiramma Nagar. Here the anganwadi center is often perceived to be an institution for the most destitute and lower castes, so certain groups do not use its facilities either due to prejudices or due to discontent with the quality of service. To target child malnutrition on a broader scale the quality of service offered by the anganwadi centers needs to be improved considerably. In Indiramma Nagar there are too few facilities to care for the whole population and the existing facilities are not well equipped.

Two anganwadi centers in Indiramma Nagar were visited a number of times and only once the anganwadi teacher was present during attendance hours and it seemed that most of the tasks which should be fulfilled were not targeted. People frequently asked why they should bring their children there and take part in the program themself if nothing of the intended actions were taken with the required quality. Therefore it would be necessary that actions are taken to properly implement and then monitor the ICDS system.

demanded that the government increases its actions to control prices and buffer price rises. A higher transparency is demanded to enable consumers to make health conscious decisions to which they are not able now because they either do not know which items would provide for a healthy and chemical free diet or lack the financial means to afford those (Ja & Ka 16.10.2011).

Further the government should encourage the production of more healthy products which are often perceived as less profitable by today's farmers. They demand from the government to promote changes in the agricultural pattern that it should not be only profit oriented as they believe it to be nowadays, but also health conscious. For example Ja & Ka, who are both leaders of local women's groups, state that in the past partially milled rice was frequently available which has a very high content of vitamin B, but was more easily affected by pests and diseases and harder to store, as compared to the now common polished rice. Therefore the more healthy variety was not perceived as profitable by the farmers and companies and suppressed by the less nutritious polished rice varieties (Ja & Ka 16.10.2011).

Television and radio are frequently available throughout the area and among other things air programs about health and nutrition, but these are mostly focused on upper and middle class problems like obesity or diabetes. These media could be easily used to spread information, especially among the illiterate persons for whom it is difficult to acquire information by other means. But as Ja and Ka observe, the programs do not target poor peoples problems, so instead of spreading awareness and distributing knowledge related to their needs, the poor will learn the wrong things and get wrong expectations and desires from those programs.

Ja and Ka demand that the system as well as the government should take responsibility to ensure proper education, especially in regards to health and nutrition, of all strata of society for which the television or radio could easily be used. At present they often feel helpless and lack the means to solve existing problems in regards to food availability and quality on their own. They feel that the problems related to nutrition and pollution of food items are increasing day by day and especially the children suffer from these. They often fear the future because they do not know about the long term effects of chemically polluted food and its influences on the body. They feel somewhat neglected by the government, every day they try to supply their family with the most nutritious food available, they know about many problems, but they are left without information or means to solve those (Ja & Ka 16.10.2011).

Box 6: Life Story Ro/ Indiramma Nagar

Ro is around 65 years old but does not receive any pension because the only official certificate stating her age is her ration card which claims she is only 45. She is not able to legally prove her age to claim any pensions. Since 35 years Ro lives in Indiramma Nagar and her family is well-known and respected in the community. Both her paternal and maternal family is living in Indiramma Nagar which allows for lots of support in everyday life. She was able to provide her children with good education; they attended English medium schools up to class XII. One of her daughters now works as a pharmacist in the local urban health center. Her husband used to have a secured job but is retired now and her children are supporting both of them. She used to be the head of the family because her husband was away to work for quite a long time, so she used to make all economic decisions.

Since her childhood her family raises animals. At present her family owns 10 Buffalos, 5 goats, 6 hens and 1 cock. These animals provide them with financial security or emergency relief, additional income and additional food. In case of urgent needs they can sell animals, furthermore they sell some of the surplus milk and eggs. Due to their animals the family consumes milk products and eggs regularly, Ro is also extremely conscious about nutrition. She claims that until now she is healthy and does not suffer any health problems like the frequent high blood pressure or he like. She explains this with her constant attempt to supply her family with healthy food like millets and the frequently available protein because of her animals. She claims that she is healthy because especially in her childhood she had good quality food from millets and other grains.

But she observes that the quality of the available food decreased in the past years and nowadays her children suffer from health problems because the quality of the availably food has gone down and it is not as healthy as it used to be. She kept the habit of eating millets like bhajra and jowar on a daily basis and also tried to pass this habit to her children but she is very unhappy with the available quality which does not have the good taste and properties of her childhood food. The quality has decreased and the price has increased in the same time, which leaves only lesser qualities available for her. Millets nowadays are much higher priced than rice or wheat and also not available as frequently but still she tries to consume them on an almost daily basis because she knows about their nutritional benefits. But she also knows that she is only able to do so because she belongs to the economically better off families in the area.

She was raised to know the value of a proper nutrition and she always applied the values taught by her parents. Her parents taught her that it is better to eat seasonal fruits and vegetables as a complete dish on a daily basis, because without them a meal is not sufficient.

She tries to give advises regarding nutrition to other people. There she tries to promote the consumption of millets, more vegetables, milk products and proteins on a daily basis and uses her own example to show he benefits of a balanced nutrition. Further she starts economic appeals which emphasize that it is more useful to spend on proper food than on medicines later on. This would enable the households to save money on the long run, which she knows from her own experience and to which she also attributes certain parts of her family's success story. But she observes that most people do not listen to her advises, they are either too much trapped in their daily routine or they cannot afford to spend a single rupee or some time differently (Ro 08.10.2011).

Many people state that they know what to consume and especially what would be necessary for proper child nutrition, but even if they give the best parts of the affordable food to the children three times a day, the children are much weaker when compared to the grown ups or

the children in the past. This observation is directly linked with the diminishing food quality and the high contamination with chemicals which increase the negative health impacts of insufficient nutrient intake even further. Another aspect of the decreased food quality available are the high amounts of non-food contaminants like stones, twigs or even insects and the like. It is extremely time consuming to extract those out of the food before preparation and they also add to the price, because when purchasing they have to pay for all the non-edible contaminants as well.

Another factor often influencing the nutritional pattern is the often mentioned lack in time to freshly prepare certain foods due to a higher rate of women working outside the house because of economic necessities. This lack of time was often attributed to be a side effect of urbanization and modernization which leads to a preference for fast food which again is often perceived as less nutritious food. Millet based dishes or freshly baked rotis contain more nutrients than the frequently used polished white rice but are more time-consuming in preparation and not as easily prepared. It requires certain preparation skills which are often lost in the younger generation. Breakfast for example is not prepared anymore in most households, mostly only tea and biscuits, leftover rotis or even modern replacements like instant Maggi noodles are prepared, due to the common lack in time (Ja & Ka 16.10.2011).

The existing time problem in regards to nutrition is also linked with changes in the family structure where nuclear families gain importance. In joint families Ja and Ka say that their was always somebody to either take care of the children or to prepare time consuming food items like rotis or millets. In nuclear families as their own, there is nobody to help, so they start to give fast food or snack items to the children, even if they know they should not. They also observe that many children have lesser growth, are weak and suffer from seasonal diseases and fever at much higher rates as compared to the last generation. This fact they attribute with the rising prices, with the general decline in food quality and increasing rates of chemical pollution (Ja & Ka 16.10.2011).

Similar to food items which often contain high rates of pesticides this is also stated for the drinking water supply. The safety of the provided drinking water is considerably reduced by its pollution with chemicals and pesticides for which no proper treatment is available. Filtering and boiling may be helpful to clean the water from bacteria and other microorganisms, but this does not help to purify the water from health hazards caused by chemical contamination.

In the Bashirbad area only little awareness about nutrition and health could be observed. Most of the households mentioned that they are satisfied with the quality and quantity of food

Box 7: Life Story La/ Indiramma Nagar

La is 38 years old and has two daughters who are 17 and 13 years old. Her husband is a carpenter and earns quite well, but he is heavily addicted to alcohol and spends all his earnings on drinks and harasses her and the children. In summer 2011 she started to separate from her husband. Previously she gave a complaint at the police about his treatment of her but the actions of the police did not lead to changes in his behavior. She is in high debts because of her husband's alcoholism and his expenses for his second family. She sold her house last year to pay off her husband's debts with money lenders who threatened her violently. Today she lives in a rented house for which she spends 1500 rupees a month.

Due to her dire economic situation she faces lots of trouble to supply her family with sufficient food. She knows about the essentials of a healthy nutrition but she is not able to afford those. She states that if she would have more money, she would prepare cereal roti (unleavened flatbread), millets, fruits and leafy vegetables on a daily basis. Presently she gets rice from the fair Price Shops at 2 Rupees/kg which is sufficient for 15 days. After that she buys the same rice on the black market for 12 Rupees/kg. Daily she prepares 1.5kg of rice to feed her family which is sometimes accompanied with liquid dal or vegetable soup (Sambhar). In most days she uses only tomatoes as vegetables, because they are the cheapest vegetables available. But even here she is only able to afford ¼ kg a day for three persons, which was reduced from ½ kg recently. Her youngest daughter receives Mid-Day Meal in school and even if she is not totally satisfied with his food, at least food is provided. Whenever she has some money left she spends it on an improved meal, but often she is only able to provide rice with a liquid, heavily spiced broth, and sometimes even that only in little quantities.

She often faces headaches and general weakness but cannot afford to go to see a doctor and get a health checkup; on the worst days she buys some painkillers to manage the day.

Her oldest daughter is working in a cloth center as an assistant where she does manual labor like cleaning and supports the salesperson. She studied till the tenth grade but could not continue her education due to economic reasons. But with a comparatively good education of a finished tenth grade she was able to find a secured job in a safe working environment. The younger daughter studies in seventh grade. Even in La's economically and private extremely tensed situation she tries to keep her children in school at least until the tenth grade, because she knows about the value of education for chances of life improvement. She compromised her needs to plan for the future of her children and did not make short termed decisions based on economic necessity. She sees first benefits of these decisions in her oldest daughter's employment.

Her attempts to separate from her abusing husband are supported by the local women's group and the community elders. Her problems with her husband are known to everybody in the neighborhood; she receives emotional support and advices from these groups and does not need to fear to face social stigmata due to her attempts to separate. She is financially supported by her paternal family.

Her economic and social situation is one of the worst observed in Indiramma Nagar, but still she has hope for changes and an improvement of her situation. She is not helpless and passively accepting her living conditions, she does not blame other for external factors influencing her life; instead she tries to change her situation and provide her daughters with future prospects even if she has to compromise with nutrition and other assets (La 15.10.2011).

which they consume and compare this to their previous living situation in their home village. In their perception their situation has improved since their migration.

Now they can earn more money and they do not stay hungry. Many households say that they could not afford to fill their stomach in the past and continuously felt hungry. This, they state, has changed now and they are able to fill their stomach nearly all the time. Here, a different scale of perception needs to be applied. The demands of the people in Bashirbad in regards to nutrition are much lesser than in Anna Nagar/ Indiramma Nagar due to their much less developed living situation and lesser knowledge and awareness. In Bashirbad the main focus is laid on the feeling of hunger which is in most cases satisfied with only rice and pickles whereas in Anna Nagar/ Indiramma Nagar most households are not satisfied with a mere filled stomach. There other meal components or nutrients are demanded which changes the focus from "hunger" to "malnutrition". The scope of hunger or individual satisfaction is extremely different in both areas and can hardly be compared.

2.4.3 Self Help Groups and social issues/ challenges

Women's Groups are often viewed as "cost-effective activit[ies] that can not only improve women's economic situation through savings and loan schemes but also encourage female solidarity and independence"(Sridhar 2008: 138) and therefore can have considerable effects on the daily life of women. The cohesion promoted by these group activities can influence all aspects of live from negotiations over household finances and expenditures till domestic violence and are aimed at general female empowerment and the formation of friendship bonds providing social security (Sridhar 2008: 139). In Anna Nagar/ Indiramma Nagar various attempts to form women or neighborhood solidarity groups can be observed and some are depicted in the following.

According to Ja and Ka, who are both leaders of local women's groups with ten members each, there are 24 women's groups of approximately the same size existing in Anna Nagar/ Indiramma Nagar. One main objective in these groups who are in existence since 2008 is it to encourage individual savings. Each member gives at least 100 rupees per month which is saved in the groups combined account at a local bank. The women's group provides loans in case of emergencies and also provides starting finances for women's empowerment measures like the establishment of a small tailors shop. All 24 women's groups in Anna Nagar/ Indiramma Nagar are joined in a slum wide organization called "Samaikya" to whose meetings each group send two representatives. In these group meetings they discuss socio-economic problems, family conflicts, health and education, sanitation aspects and loans and plan their activities, from where it spreads into the individual groups. In addition the women's groups

conduct health and education camps in the area. Through night schools and discussion meetings it is tried to educate the mostly illiterate women on the basics of nutrition, health care, their rights granted by the constitution and to provide knowledge about ways to approach governmental institutions or banks. They try to empower the women to make conscious decisions regarding health and nutrition and also enable them to generate additional income through the creation of new livelihood opportunities. They try to promote social security and enable women to be more independent in their approach towards institutions and society (Ja & Ka 16.10.2011).

Samaikya conducts health awareness and checkup camps focused on women's and children's health with a special focus on nutrition and reproductive health. Early marriages and young pregnancies are common and especially when combined with insufficient nutritional intake create various problems for mother and child. Miscarriages and preterm birth are common; children are frequently born with low birth weights and size and are or can often not be properly breastfed, which leads to protein malnutrition during the most important time in regards to child development. A survey from Samaikya found that 2/5 of all women suffer from hormonal disorders, 3/5 of all children have eye problems or face visual impairment and in addition are stunted in growth or suffer from heart failures which is all attributed to malnutrition (Ja & Ka 16.10.2011). The existing women's groups are primarily self-help groups but they also try to make the problems of urban poor groups known to the government. They feel that they are only a small group which does not have much power or influence, so presently their claims are often and easily ignored. Nevertheless they strongly believe that with increased work their organization will grow and combined with improvements on the small scale will manage to access the realms of the administration (Ka 08.10.2011).

3. Situation assessment of urban low - income groups

People belonging to urban low-income groups face a lot of similar challenges and hardships, but the degree of exposure to these problems or the vulnerability towards changes in the livelihood assets is influenced by individual factors ranging from household finances over social networks to health, nutrition and government schemes and programs. Nearly all urban low-income households face similar hardships but to different degrees and extends as could be observed in this study. In the following chapter some general problems faced by members of urban low-income groups are highlighted and contextualized with the findings of this study to get an overview of on the people's situation and to answer the pending question about the possible return of "hunger" into urban areas.

Since the 1970s the Indian government launched various schemes, programs and strategies to alleviate poverty and to assist the urban and rural low-income groups with regards to nutrition, income and health. As good these actions were intended, in reality they face lots of problems related to implementation and organization which are aggravated by the often rampant corruption and lacking efforts to adjust these programs to modern developments. In many cases it can be observed that problems of malfunctioning schemes and programs are either ignored or forged or concealed, so that on paper a much better picture is painted than exists in reality. If problems become obvious and can no longer be denied they are most often attributed to the weakest member like the anganwadi worker or the fair price shop owner without addressing lacks in the system as a whole (Supriya 05.10.2011; M. A. Shakeel 25.10.2011).

The official records often seem to be used to support oneself, to show to the superior administrative powers how well the system is working as a proof of one's duties. They are a self-legitimation which does not reach the grass root reality as it can be seen for example in the poverty line statistics which show a decreasing rate of people living below poverty line. But this change cannot be attributed to an improvement of the poor people's situation. It is rather explained by statistical tricks and a lowering of the official poverty line which of course decreased the number recorded poor people but did not change anything in reality. Similar observations can be made regarding reports of the ICDS, PDS and pension scheme which are often described to be well functioning on paper whereas in reality lots of problems can be observed like bad quality food, under-weighting of goods, arbitrary opening hours, black marketing and the like. Often nobody is kept accountable besides the grass root level worker and no wide ranging changes can be implemented into the system which is still in most cases

on the state of knowledge of the 1970s. This can be observed in practices which have proven to be unsuccessful but are still conducted, like the distribution of high protein powder in the anganwadi centers. This protein supplement cannot be digested by children who are already suffering from diarrhea, instead of benefitting their nutritional situation in this case this powder only aggravates the diarrhea and adds additional stress on the individual's body. This fact has been proven scientifically but still high protein powder is distributed instead of developing better fitting solutions (Supriya 05.10.2011). Comparable facts to the argument of a statistically improved poverty rate can be stated in regards to nutrition related health issues ranging from "light" health deteriorations like vitamin deficiencies to starvation deaths or hunger related deaths. Here it can be observed that in the official records the number of starvation deaths decreased a lot. But it can also be observed that guidelines were issued that deaths are not to be counted as hunger induced when some amount of food - no matter how less - was available to the victim (Rama Melkote 27.10.2011). Besides this, since the side effects of continuous malnutrition like organ failure are not counted as nutrition induced, the cause of death is attributed to a disease which has nothing to do with the nutritional situation of the individual in the official records. Due to this fact most statistics show a much improved health and nutrition situation of the poor in India because starvation and hunger induced deaths have decreased, that they were just counted differently is not stated at all. The decreasing numbers of poverty affected people derived from the poverty line or the health statistics can again be used to "prove" that the government's measures are working as intended. If one would take a closer look and investigate the occurring deaths in detail one could maybe state that starvation deaths with a mere focus on starvation as the absence of food are decreasing, but that malnutrition induced and aggravated health problems which lead to the death of the affected person in the course of time are still occurring with the same rate as they did decades ago (Supriya 05.10.2011).

For poor, often less educated people it is extremely difficult to access governmental institutions to apply for schemes or demand their improved implementation either due to a lack of knowledge about how to pursue their demands or by a lack of financial means to pay the frequently demanded bribes. The high amounts of money demanded to reach ones aims or get access to certain schemes often ban low-income groups to access those. Furthermore due to corruption there are many loopholes to divert schemes or benefits to the highest bidder which further decreases the availability for the intended beneficiaries (Supriya 05.10.2011). This interwoven circle of corruption, neglect, denial and situation assessments which are statistically twisted makes it difficult to get official attention towards the real life problems which

urban low- income groups have to face in their attempt to secure a living and creates additional problems to access schemes and officials and make oneself heard. Since 2001 a case regarding the right to food is pending with the Indian Supreme Court. This case is aimed to force the government to adjust and implement its existing schemes and actions to reality and therefore assure the right to life as a fundamental right as it is given in Article 21 of the Indian Constitution. The right to life includes access to food, shelter, drinking water and health care, therefore the Supreme Court had declared certain responsibilities of the government and ordered to adjust and implement the existing schemes properly, but until now this was only followed rudimentarily (M. A. Shakeel 25.10.2011).

In 2011, intense discussions were conducted regarding a planned Food Security Bill which should reform the governmental schemes like PDS, ICDS, Pension and the poverty line to target the problems of the Indian poor with higher effectivity. Some of the major suggestions of the Food Security Bill are increased monitoring devices to assure proper implementation and function of the schemes and also increase the accountability of the official structures and not only of the grass root workers. It is necessary to keep in mind that it is not possible to find an all-India solution for the problems of the poor. Differences between urban and rural areas as well as between the different federal states need to be considered; therefore a decentralized approach is preferred. Common malfunctions of the PDS like bad quality provisions, irregular opening hours, under-weighting, forged receipts and ration cards shall be addressed by monitoring and introducing working complaining structures which are accessible for the beneficiaries without the need for bribes. Besides a fight against the often rampant corruption which is detached from the Food Security Bill, the bill is aimed to generate awareness on the issues of the "adjusted" poverty line (explained in Box 1) and also tries to promote minimum wages and fair wages corresponding to the work. In addition it includes various means to encourage the empowerment of women, ration cards for example shall hereafter be distributed in the name of the oldest female member of the household, as an attempt to ensure better usage of these cards and further enhance the status of the females within the household (Round Table meet on Food Security Bill 2011; 09.10.2011).

According to Rama Melkote even the most perfect Food Security Bill will not ensure freedom from hunger for the whole population, but at least it puts the issue of food security on the agenda of the government and if the bill would be passed other institutional paths would become accessible to enforce actions to promote food security. If food security would become a right through this bill, its violation by neglect or other means would become a punishable crime. But as it can be frequently observed nowadays, the government and its actions are full

of contradictions and individual self-interests are enforced by corruption. For example, the income earned while working should allow for a life in dignity and be sufficient to provide oneself with at least all basic needs. But nowadays most wages of daily laborers, even those employed in government programs are often much lower than the fixed minimum wage of around 150 rupees a day. Here two contradictions within the administrative argumentation can be observed. The first is a fixed minimum wage which is not applied by the government itself and further its implementation is not pursued the second is the discrepancy which can be observed by issuing a minimum wage of 150 rupees on the one hand and lowering the poverty line to 37 rupees a day. These contradictions and the vast number of involved administrative divisions and sub-divisions make it extremely difficult to target existing problems effectively, therefore the possible Food Security Bill promises some relief in this regard (Melkote 27.10.2011).

Besides these structural problems in administration and poverty alleviation which affect the urban poor in their aim to fulfill their needs, the individual's situation is also affected by its own actions. Following common problems related to the individual and its actions are described as they were found in literature or mentioned by experts and are then tried to relate to the selected samples. Women, (girl) children, elders and migrants are often described as the most vulnerable groups of society when it comes to nutrition related problems. Persons can be part of more than one of these most vulnerable sections, making elderly migrant women for example even more vulnerable due to their concurrent belonging to multiple groups with special vulnerability risks. Due to the traditional division of labor women bear the burden of preparing the food for the household and also arrange for its supply with drinking water. This puts a lot of pressure on the household's females who often have to spend long hours to carry water and to prepare food with often limited resources. In regards to food distribution within the household it is quite common that the male members get served first and also get the best quality items. The female household members, elders and children as well as the housewife eat what is left after the males have eaten. Quite often the higher nutrient items like meat, eggs or even dal and vegetable curries are gone by the time the female household members eat and often only rice with spices or liquid soups is left for them to consume (V. Usha Rani 04.10.2011). This often leads to lacking intake of nutrients and calories by the female household members based on gender discrimination. This gender discrimination can also often be observed in regards to childcare practices. The boychild is more often given quality food or protein rich food like milk and when he falls sick he is more likely to receive treatment and special food items sooner than his sisters would. Due to this fact, the female members of the

household are more likely to be affected by malnutrition than he male household members (P. Pushpa Rani 29.08.2011).

Related aspects can be observed in regards to investments into education and future prospects which are more often given to the boy children. Investments into the education of girl children are often not perceived to be as valuable or necessary because after marriage the girl leaves to live with her husband's family and therefore these investments are lost for the household. Therefore it can be observed that if girl children attend schools it is more likely that they stay in government schools while the boys attend private schools, which are believed to provide better quality of education than government schools, or that they drop out of school much earlier (Supriya 05.10.2011). Further it is quite common that children are taken out of school in case of dire financial needs. Here it is often the girl child whose education is compromised first to save some money. In case of extreme financial distress children are often send to work and to earn their share to support the family which further decreases their changes for an improved living situation in the future. At present these trends seem to change slowly, at least in the selected sample no obvious differences in the treatment of boy or girl children could be observed in regards to education or care and nutrition. In the present situation all households stated that they would not compromise the basic education of their children because they know about the importance of education for future life chances. Only in some cases children or youths had to leave school after the eight or tenth grade to start working. Many parents were willing to compromise with other aspects to allow for their children's further education. Whether this trend can be continued when the economic situation gets even tenser than today is doubtful. In regards to nutrition many households mentioned that they are consuming the meals together, or if not, that mostly all members get served the same quality and quantity of food, which can be interpreted as hints towards a slow change in the role and status of female household members. But changes in the household's composition and status and role of selected household members can also lead to increased problems for certain members, especially the elders.

With an increased occurrence and importance of nuclear families and a decline of joint families it gets more difficult for the elders to manage a living, especially without access to social security systems. It is often stated that the traditional obligation to care for the elder family members loses importance; especially in cases where either the social relations are tensed or extremely limited funds are available. This leads to an increasing number of homeless or destitute elders who somehow have to manage to survive without family or social support which often leaves only begging as an option to survive. According to Supriya most of the intra

household problems or problems with the elder generation are based on economic reasons and she attributes this to an increased individualization which can lead to tensed social relations (Supriya 05.10.2011). It could be observed in the samples of Anna Nagar/ Indiramma Nagar and Bashirbad that nearly none of the old age persons received the pensions they were entitled to. Most of the old age persons managed to survive through the help of their children and their families and still lived in joint families or very close to each other which allowed for easy assistance. On the other hand some cases of old age couples or women were observed who had to manage without family support or access to social security schemes and these had to face lots of challenges. Due to their old age they are no longer able to perform physically demanding work, as most of the daily wage options are, and they are confronted with lots of problems to earn their livelihood which often only leaves begging.

People who have migrated recently or who are still living in not legalized settlements face additional problems because they mostly cannot access any governmental schemes in their present settlement, since they do not exist in the official records. It takes a long time and often also bribes to get a legalized status to be able to access social security schemes like pension or ration cards in their new settlement. Without access to ration cards or pensions the required money to purchase provisions increases considerably which further stresses the household's economic situation and makes it more difficult to make ends meet (N. Sudhakar). This aspect could be confirmed in the sample. In Bashirbad where the settlements are predominately inhabited by recent migrants nearly no household could access ration cards or other schemes in Hyderabad. Some of the household still had access to social schemes in their home villages but due to the long distances of often more than 200km, they could not make use of those. Therefore it can be confirmed that recent migrants or illegal settlers possess less abilities to buffer dire financial situations when compared to long term settlers with recognized status as found in Anna Nagar/ Indiramma Nagar.

A further set of household related problems influencing the nutritional situation and the health of the household members can be found in the household income and expenditure as well as in issues of knowledge, education and awareness towards nutrition and health or in existing adaptation and coping strategies. Many low-income households suffer from high debts which are often caused by lacking knowledge of sustainable household economics or lacking considerations of future developments. Economic planning is often not well developed and extremely difficult to start in tensed situations. Without the debt burden or high expenditures for alcohol or other drugs which are quite common, most low-income households would be able to manage at least their basic nutritional needs. It can be stated that many households do not

suffer from income induced problems as the primary cause of their problems; they rather face problems due to their expenditure. Especially expenditures for alcohol and drugs tend to rise over the course of time and in addition the household's income often decreases because the addicted person cannot earn as much as s/he could before. Addiction leads to deteriorating health and besides increased expenditures for intoxicants and lesser income, it also increases health related expenditures. It could be frequently observed in the samples that there are many households suffering from alcohol addiction, in most cases from the male members. In some cases more than 50% of the household's income was spend on intoxicants, which makes it extremely difficult to provide for the households basic needs. Addiction problems influence the household's financial situation from various sides and also tend to deteriorate the households social status and the intra household relations. Most cases of household violence and abuse can be attributed to addiction problems. Addiction problems have two sides which need to be considered and make it difficult to target these problems. On the one side addiction can be the cause of financial and nutritional problems or aggravate existing problems in the course of time, but on the other side it can be used as a strategy to deal with nutritional stress or hunger (V. Usha Rani 04.10.2011). This dealing is of course extremely unsustainable but often intoxicants are used to either suppress the feeling of hunger or eliminate and damper the individuals sensibility towards the tensed living situation. The ratio of addicted persons to income earners is also very important to determine the households' vulnerability in regards to changes in nutritional supply. Households in which the principal earner has addiction problems and where no other income is available face bigger problems than households who have diversified sources of income, even though there may also be problems caused by addicted members, but the ratio of the income spend on intoxicants varies considerably between these two scenarios.

A lack in general income or a lack in income available to be spend on nutrition leads towards the establishment of nutritional patterns focused on the gulping of calories mostly found in rice. Here rice is often only accompanied with small amounts of low priced vegetables or spices which can be diluted to a sour/ spicy soup (sambhar) which adds taste and allows for the consumption of comparatively huge amounts of rice. Often only rice with pickles or tamarind juice is consumed which fills the individual's stomach and satisfies its feeling of hunger but the polished white rice contains barely any nutrients besides carbohydrates, which leads to severe malnutrition over the course of time (Supriya 05.10.2011). In addition on the long run this nutritional pattern is aggravated by a frequent lack in economic planning. In many households the daily surplus (if available) is not saved for times of need like illness or rainy days in

which employment options in construction sites are scarce and therefore no earning is possible, it is often spent each day on small relative luxuries like (expensive) meat products or alcoholic beverages, cigarettes and the like (P. Pushpa Rani 29.08.2011). In September 2011 for example one kilogram of chicken costs approximately 160 Rupees and one kilogram of mutton around 200 Rupees (Prakash 29.09.2011), which is very expensive when compared to the average daily wage of a male laborer of around 300 Rupees or the price of staple food items. In the same month one kilogram of rice (sonamasoori) was 30 Rupees, of toor dal 62 Rupees, of onions 16 Rupees and of tomatoes 8 Rupees (own evaluation, confer appendix). This kind of expenditure pattern could be confirmed in many cases of the sample and as understandable as it may be to sometimes afford special items, this creates many problems if due to these no emergency backup is available to cope with short time challenges like days without employment. To afford short time luxuries unfortunately often goes hand in hand with the need to compromise with everyday food supplies. Furthermore, the rare consumption of high amounts of protein rich or greasy foods in a nutritional situation which can be characterized as malnourished leads to mal-absorption and gastro-intestinal problems because these food items can no longer be digested properly when the whole system is already weakened by a lacking general food supply. This expenditure and nutritional pattern can be attributed to a lacking knowledge of economic planning and nutritional requirements and also to a lacking awareness about the future implications of ones actions.

A lacking knowledge or awareness can also often be observed when it comes to the used food basket, which is often limited to the same low priced items. Certain items like carrots or cabbage for example can be equally inexpensive in season but they are often avoided because the women do not have the required knowledge how to prepare these items (P. Pushpa Rani 29.08.2011). Similar facts can be stated for the preparation of more healthy foods like millets, whole grain cereals or unpolished rice varieties whose preparations are unknown to the women but who often knew about their nutritional benefits (Ja & Ka 16.10.2011). It was observed that varying degrees of knowledge and awareness about nutrition, health and economic planning where existing within the sample. The more developed their living situation was and the more educated the household members were, the more they were aware of relations between health, nutrition and economics but still in most cases they were lacking the required means to apply this knowledge in their daily life actions.

Persistent malnutrition, even only a slight one, causes a huge variety of diseases and leads to a deteriorating overall health situation which decreases the life expectancy considerably. Early marriages and pregnancies in teenage years are still quite common and especially in combina-

tion with malnourishment create lots of health risks for mother and child. Especially the health and nutritional situation of women affects the future generations because malnourished mothers give birth to already malnourished children which have less chances to develop age appropriate due to their often bad general health condition at birth. Furthermore malnourished mothers cannot breastfeed the infant in sufficient amounts so that child malnutrition is aggravated which leads to retarded development in various degrees and manifestations. Knowledge about the relations of health and nutrition is often lacking and sometimes diseases are attributed to witchcraft or other supernatural influences. While this may give the individual an explanation, it also takes the responsibility for one's own life and its development away from their scope of action (Supriya 05.10.2011; P. Pushpa Rani 29.08.2011). In the sample the existence of health problems could not be proved in detail because no medical examinations were conducted but through observations it could be assessed that many people have aged prematurely and often have smaller height than the average. Especially women were often quite thin and one could see that they face a lot of tension in their daily lives. Many children also appeared to be (slightly) stunted and underweight according to their age, but the extreme obvious signs of hunger or malnutrition like bloated stomachs or extreme meagerness could not be observed. This gives hints towards the degree and severity of malnutrition which could be observed in the settlements. Outright starvation or hunger could not be observed, but malnutrition driven by a lack in proteins and vitamins above all can be observed in varying degrees in all interviewed households.

4. Conclusion: Does Hunger return back to urban India?

The main aim of this study was to assess the food security status of urban low-income groups in two different localities in Hyderabad and answer the question if hunger is returning into the urban areas in the context of rising prices. It can be stated that hunger does not return to urban India, because hunger was never gone and therefore cannot return. Hunger in urban areas has changed its appearance and its face, urban hunger is often invisible but nonetheless persistent.

Beginning in the 1970s urban hunger changed its manifestation and became less and less visible and recognizable. The images of starved and wasted people could no longer be found frequently in urban areas and the focus in the discussion of hunger and starvation moved to the rural areas where extreme cases of hunger and starvation are still found and not deniable. Urban hunger instead appears in form of protein and vitamin malnutrition and only in rare cases idealized cases of starvation can be found. If ones nutritional supply is continuously at the edge of hunger, but due to the frequent availability of subsidized rice and other carbohydrates still dangles around the minimum calorie requirements, the nutritional problems become invisible for the general view which scratches only the surface. If whole groups of society have to manage with limited nutritional intake the whole population develops criteria of malnutrition like stunted growth, slim figures and chronic diseases. Therefore it can be stated that if "everybody looks the same" it gets more and more difficult to either recognize this as a malnutrition induced derivation from the norm or to raise awareness within the society that there are severe problems of hunger or lacking nutritional supply existing. Nearly every person belonging to urban low-income groups faces varying degrees of chronic malnutrition and it can be stated that food security could not be achieved for these groups.

The supply with staple foods like rice may have improved a little due to the availability of the PDS scheme but this only works as a kind of veil for the severity of the existing food insecurity in urban areas. The governmental schemes and many other nutritional or economic support measures are at the moment extremely limited in their range, do not reach the poor properly and do not target the causes of chronic food insecurity. Instead they take the edge off the hunger and manage to keep the problem out of sight because due to the availability of a minimum in calories for most urban low-income groups it is managed to keep them alive without blatant signs of hunger. The concomitant health impairments people suffer in the course of continuously lacking intake of essential nutrients are often delayed in their visibility and can easily be attributed to other external factors like the unhealthy environmental condi-

tions and the like. The side effects of malnutrition occur and increase insidious and hidden, they only get visible after prolonged exposure and start to be undeniable only when they have crossed a certain threshold.

The extremely rising prizes for food and other consumer goods since 2007 have of course aggravated the food insecurity of many households and increased the occurrence of malnutrition but they did not reintroduce the problem. Furthermore the price rises may have led to food insecurity in households who managed to be food secure beforehand, but this was not evaluated in this study. Of course economic factors influence on the food security situation of households and of course did the rising prizes in combination with a general economic downturn increase the exposure to food insecurity and further diminished the access to food items. But in general the influence of rising prices was not as high as it was expected. This does not necessarily be a promising sign; it furthermore can be explained by the already extreme low food security status most urban low-income groups had to face beforehand. Most comparatively higher priced items like animal products or vegetables and pulses in amounts issued by nutritionists had been out of the food basket before and due to the continuous exposure to lacking purchasing power and food supply the households adjusted themselves to still affordable food patterns. Urban low-income households have survived in food insecurity by adaptation to little food intake and various strategies to limit their expenses by skipping meals or meal components which was aggravated by the general price rise. Especially households which are in dire financial stress like households with ill or addicted members, women headed or all female households or elders and single women are extremely vulnerable to changes in market prices. These household are now often at the edge of collapse. Due to the constant threat of food insecurity which has always been present in the last years many households have already burned their savings and tangible assets and are left without any financial scope to buffer the rising prices. It can be stated that the price rise influenced the nutritional situation of urban low-income households but rising prices are not the only factor which is to blame for the decreasing of food security and the persistent malnutrition. There are other equally or even more important influencing factors than the mere market price of food items which should not be denied.

The expenditure pattern which could be observed in many low-income households is marked by a considerable lack in economic planning, which leads to increased food insecurity, because most financial buffers are exhausted. Addiction problems, high expenditures for weddings or modern amenities coupled with little awareness about future implications of these decisions lead to indebtedness and therefore decrease the financial means available to be spent

on nutrition or health. For most low-income households official structures like banks and loans are not accessible, they rely on informal money lenders who often demand exorbitant interest rates and pressure their clients a lot, but there are mostly no other means accessible to ease the financial crisis. It can be stated that for the majority of urban low-income households expenditure induced problems are much more relevant than lacking income or even the rising prices. Often food security is threatened by alcoholism and the like in a much higher extend than by increasing prices for food items. Lacking awareness and knowledge about economic planning, nutrition and health are one of the main problems which lead to persistent malnutrition.

Different sections within the urban low-income groups face different problems or perceive their problems differently. On an objective view, migrant groups living in non-legalized settlements like in Bashirbad face more severe problems than most of the households living in more developed and recognized settlements like Anna Nagar/Indiramma Nagar. Concordant with increasing living standard and education also the awareness for problems related to nutrition and health increases and the individuals situation assessment gets more congruent with the findings of an objective assessments. One major problem when trying to evaluate the food security and nutritional situation is the divergence between the individual's assessment and objective criteria based on nutritional guidelines. Due to physical and mental adaption to lacking availability or affordability of certain items or amounts of food, the individual may express satisfaction with nutritional supply which is insufficient in regards to nutritional properties and therefore a nutritional pattern based on malnutrition is perceived to be normal. These individual perceptions need to be questioned critically; otherwise they will only contribute to the assumption that urban hunger is overcome and further veil the existing rampant food insecurity.

Increased education and awareness building in combination with applicable suggestions which are based on the everyday problems of low-income households and targeted at actual implementation would definitely lead to an improved nutritional situation. When awareness and planning would be improved, many households would be enabled to manage a sufficient nutritional supply, even with their income of today. This finding shall not be misunderstood as putting all the burden and fault for the persistence of malnutrition to the affected households but a certain amount of personal responsibility cannot be denied. But nevertheless it is the duty of the Indian government to ensure the proper implementation of existing poverty alleviation measures and their adjustment to the actual needs of the 21st century. Improved and fair wages and monitored prices as well as education programs matched with the needs of

the low-income groups would help to promote food security. It is and remains the responsibility of the government to ensure the basic rights which are granted in the constitution of India to all its citizens, especially to those often facing multiple discrimination or hardships due to their economic situation, their gender or caste.

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Appendix

Pictures and Graphics

Picture 5: Fruit vendor selling (overripe) bananas in Anna Nagar

Picture 6 (right): Urban Health Centre in Indiramma Nagar

Picture 7: Children having Lunch in Indiramma Nagar

Picture 8 (right): Women sorting rice, Indiramma Nagar (picture Christoph Dittrich)

Picture 9: Waste disposal site in Indiramma Nagar

Picture 10 (right): Water delivery by water tanker, Indiramma Nagar

Picture 11: Women sorting black lentils, Indiramma Nagar (picture Christoph Dittrich)

Picture 12: Women consuming Lunch which only consists of Rice with a small amount of Dal (lentil soup) in Indiramma Nagar

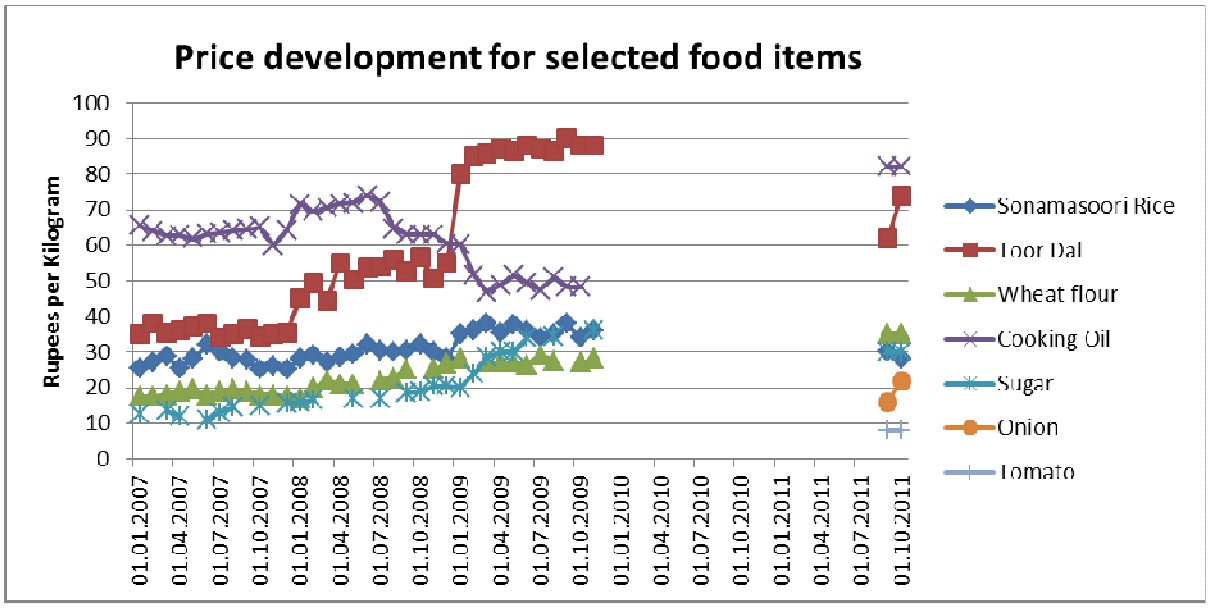
Picture 13: Vegetables used for lunch preparation showing the little quantity and poor quality available for a household of 4 members, Indiramma Nagar

Picture 14 (right): Vegetables for sale in a kirana shop, Indiramma Nagar

Picture 15: Snack items for sale in a kirana shop, Indiramma Nagar

Picture 16: Hut with kitchen utensils and water storage in NCL Colony, Bashirbad

Picture 17: Clay hearth for cooking, NCL Colony Bashirbad



Graphic 7: Price development for selected items (data collection Sarah Nischalke (2007-2009) and Frauke Bergmann (2011))

Questionnaire

Food Security Situation and Food Borne Diseases

Survey 1

Sept / Oct 2011

Panel Identification

Date: _____ Name: _____

No:_____

Area/ Village: _____

Mandal/ Municipality:_____

District:_____

Selection of Interview partner (female head of household, wife of head of household)

Interviewer Instruction: Try to interview the (female) head of the household

Namaste, my name is Frauke. I am from Germany. I am working for the Project "Sustainable Hyderabad" which is concerned with food supply and health. My research is aimed at getting an overview of the food security and health situation in Hyderabad . I am interested to learn about your consumer behavior, your attitudes and the problems you may have to face to supply your household with food. The information you may give, will help me to identify certain problems and consumption patterns related to nutrition supply and health. The results of the entire survey build the basis for the development of pilot projects for improvements of nutritional and health situation.

Of course, I will treat your information confidential and it will not be shared with other people. The data will only be used in aggregate and your name will not be mentioned in any stage of the study.

If there are any problems or clarification issues, please contact Ms. Frauke 8978110636.

I would like to start the interview now. If there are any questions which you feel are to personal or you feel uncomfortable answering, feel free to refuse answering. I very much appreciate the time you take to assist me in my research.

Interviewer Instruction: Note the respondent's sex: Female □ *Male* □

I: Information

1. Household size

Please tell me, taking all people who live in this household (including men, women and children), how many members are there in your household? *(By household I mean all the people who usually live in this house and eat from the same kitchen as you do)*			**Number**
	• Men	**15-60 years**	
		Over 60 years	
	• Women	**15-60 years**	
		Over 60 years	
	• Children (under 14 Years)	**Boys**	
		Girls	
	• Total		

□ Refuse

2. What is your living space situation like?

2a. □ Owned □ Rented □ Squattered □ Refuse Other:_____

2b. Size: Number of sleeping rooms:_____

3. How long have you been living here?

_____-- □ Don't know □ Refuse

4. Would you please tell me the last month income of each wage earner?
Interviewer instruction: If respondent does not know exactly, he/she shall estimate

□Monthly income Wage earner 1 (Rs.): _____ □Male □Female relation_____

□Monthly income Wage earner 2 (Rs.): _____ □Male □Female relation_____

□Monthly income Wage earner 3 (Rs.): _____ □Male □Female relation_____

□Monthly income Wage earner 4 (Rs.): _____ □Male □Female relation_____

□Monthly income Wage earner 5 (Rs.): _____ □Male □Female relation_____

□ Refuse

5. Other non wage monthly income of your household (like from renting home, agriculture, pension etc.)?

□ Other monthly income (Rs.):_____ □ Don't know □ Refuse

Please specify source:_____

6. What are your households overall monthly expenditures on the following items?

Item	**Amount (Rs)**	
Food/ Nutrition		
Rent/ Housing		
Electricity		
Transportation	Public	Private
Education of Children	Private	Government
Pan, Tobacco, Intoxicants		
Savings		
Leisure Activities/ Mobile Phone		
Clothing and Footwear		

□ Don't know □ Refuse

7. Did you have any special expenditure within the last year (medical treatment/ marriage/housing etc.)?

□ No □ Yes, amount (Rs.)_____ □ Don't know □ Refuse

If yes, please specify: _____

8. Are you able to meet all your needs?

□ No □ Yes □ Don't know □ Refuse

If No, please specify reason:_____

9. How is the employment situation of the wage earners?

Person	**Secured**	**Daily Wage Labor**	**Government Programm**
Wage earner 1			
Wage earner 2			
Wage earner 3			
Wage earner 4			
Wage earner 5			

□ Don't know □ Refuse

10. Does their employment situation change within a year?

Person	No	Yes	What Changes, please specify
Wage earner 1			
Wage earner 2			
Wage earner 3			
Wage earner 4			
Wage earner 5			

□ Don't know □ Refuse

11. What is the most difficult time of the year for finding employment?

□ All are same □ Summer □ Rainy Season □ Winter □ Don't know □ Refuse

II: Food availability

1. Where do you get your food from?

Please tell the 3 most frequently used sources.

Supermarket	
Kirana Shop	
Street Food Vendor (mobile)	
Street Food Vendor (sationary)	
Bazar/Market	
Public distribution system	
Own Production	

Other: _____ □ Refuse

Interviewer Instruction: If street food vendor was mentioned continue with question 2. Otherwise go to question 5.

2. What product do you buy from street food vendors regularly?

Vegetables	
Fruits	
Snack Items	
Ready-made Foods	

Other: _____ □ Refuse

Interviewer Instruction: If ready-made Food/Snack Items were mentioned continue with question 3. Otherwise go to question 4.

3. Are you concerned about the quality/ safety of preparation of the food you buy?

□ Yes □ No □ Refuse

4. How often do you buy from street vendors within a week?

□ Every Day □ 5-6 times □ 3-4 times □ 1-2 times □ less than weekly

□ Don't know □ Refuse

5. We would like to know more about your consumer behavior.

a) How often do you buy fresh/ perishable food items within a week ?

□ Every Day □ 5-6 times □ 3-4 times □ 1-2 times □ less than weekly

□ Don't know □ Refuse

b) How often do you buy dry/ nonperishable food items within a week?

□ Every Day □ 5-6 times □ 3-4 times □ 1-2 times □ less than weekly

□ Don't know □ Refuse

6- Do you have sufficient storage facilities in regards to size?

□ Yes □ No □ Refuse

7. Do you have sufficient storage facilities in regards to safety (dry, secured from animals etc.)

□ Yes □ No □ Refuse

8. Do you have a cold storage?

□ Yes □ No □ Refuse

9. Do you have a land plot/garden?

□ Yes □ No □ Refuse

10. Do you produce any plants for food consumption?

□ Yes □ No □ Refuse

Yes, please specify:_____-

11. Do you raise any animals for food production?

□ Yes □ No □ Refuse

Yes, please specify:_____

12. Do you benefit /take part in social welfare programs?
Multiple answers possible

None	
Aganwadi Centre	
Midday Meal Scheme	
Pension	
Ration Card	
Food for Work	
Housing Scheme	

Other: _____ □ Refuse

13. What other sources (besides market) do you use to get food?
Multiple answers possible

None	
Own Production	
Temple	
Neighbors	
Midday Meals Scheme	
Anganwadi Centre	
Community Kitchen	

Other: _____ □ Refuse

14. What sources can you rely on, when you run out of food or money?
Multiple answers possible

None	
Family	
Friends	
Neighbours	
Government program/ Pension	
Money lender	
Savings and credit	
Religious community	

Other:_____ □ Refuse

15. Do you try to spend less money on food items?

□ Yes □ No □ Refuse

16. What do you do to spend less money while buying food?
Multiple answers possible

Nothing/ Not Necessary	
Buying bulk	
Sharing with neighbors/ family	
Buying lesser quality of goods	
Buying only staple foods/ only rice or bread	
Skip meals/ eating lesser amount	
Produce on your own	

Other: _____ □ Refuse

17. Have your expenditures for food risen in the last 2 years?

□ Yes, moderate □ Yes, extreme □ No □ Don't Know □ Refuse

18. Did your income rise correspondingly?

□ Yes □ No □ Don't Know □ Refuse

19. What would you wish to be able to afford?
Please tell 3 most important wishes

Nothing more	
Better Housing	
Sanitation facilities	
Higher amount of food	
Better quality of food	
Higher variety of food	
Improved water quality	
Health care/medicine	
Transportation/vehicle	
Home entertainment (TV, Radio etc.)	

Other:_____ □ Refuse

III: Food Borne Diseases, Nutrition

1. How many square Meals do you eat a day?

□ 1 □ 2 □ 3

2. How do you take food?

□ Men first □ Women first □ Children first □ All together

□ Refuse □ Other:_____

3. Do persons stay hungry after taking food?

□ Nobody □ Everybody □ Women □ Men □ Children

□ Elderly □ Refuse

4. Does everybody get the same kind/ variety of food?
Interviewer instruction: same variety means all get the same meal components.

□ Yes □ No □ Refuse

Interviewer instruction: If YES, continue with question 6. If NO, go to question 5.

5. Who gets lesser variety of food?

□ Women □ Men □ Children □ Elderly □ Refuse

6. How often do you eat the following items within a week?
Interviewer instruction: If never is mentioned please ask how often the item is consumed within a month.

Food Item	Daily	6-5 times	3-4 times	1-2 times	Never	Times within a month
Rice						
Bread/ Cereal						
Dal/ Pulses						
Milk/ Curd						
Egg						
Meat (Chicken, Mutton)						
Fish (fresh)						
Green leafy vegetables						
Vegetables						
Fruits						
Cooking Oil						
Ghee						
Spices, Chilies, Salt						

Food Item	Daily	6-5 times	3-4 times	1-2 times	Never	Times within a month
Sweets						
Snack Items						
Tee						

Green leafy vegetables: amaranth, spinach, fenugreek, radish leaves etc.

7. What is the reason for not consuming fresh vegetables and/or fruits more often?

□Price □ Storage facility □ Time for preparation □ Distance to market

□ Taste □ Don't know □ Other: _____ □ Refuse

8. What is the reason for not consuming animal products (Milk, Egg, Meat, Fish) more often?
Interviewer instruction: Not each item is required daily.

□ Price □ Storage facility □ Time for preparation □ Distance to market

□ Taste □ Don't know □ Other: _____ □ Refuse

9. When do you manage to supply your family with sufficient variety and quality of food throughout the year?

Season	Yes	No
All the time		
Never		
Winter		
Summer		
Rainy season		

10. Where do you get your drinking water from?

□ Tap water □ Own well □ Shared well □ Tanker □ Other: _____

11. What means of water purification are you using?

□ none □ boil □filter □buy packaged □ chloride

□ other: _____ □ Refuse

12. Do you have access to sanitation facilities (toilets etc.) and waste disposal?

□ Yes □ No □Refuse

13. Do you or your household members suffer any health problems?

□ Yes □ No □Don't know □ Refuse

Interviewer instruction: If YES, continue with question 14. If NO, interview finished.

14. What health Problems do you or your household members have?
Multiple answers possible

Diarrhea	
Respiratory infection	
Anemia	
Low weight	
Stunned growth	
Skin diseases	
Visual impairment	
General weakness	
Edema	
Parasites	

Other:_____

15. What do you think may have caused these health problems?
Multiple answers possible

□ Environment □ Air pollution □ Water quality □ Fate □ Food quality □ Food amount

□Animals/ Insects □ Don't know □ Other: _____

16. What do you do regarding these health problems?

□Nothing/ Accept □Getting treatment □Learn to prevent □Other: _____

Closure of Interview

Thank you for sparing your valuable time!

Your answers will help a lot to get a better understanding of the nutritional situation in Hyderabad.

All the information you have provided will be kept confidential and anonymous and will be used for research purposes.
If there are any other questions, I would very much appreciate if I can come back to you.
Thank you very much.

Interviewed Persons

Table 1: Detailed interviews Indiramma Nagar

Initials	Date	Individual features
Ya.	15.10.2011	HIV positive widow
Ro	08.10.2011	Older women, owner of animals, conscious of nutrition
Ka	08.10.2011	Works in urban health center, daughter of Ro
Ja & Ka	16.10.2011	Women's group leaders
La	15.10.2011	Heavily drinking husband and high debts
Re	15.10.2011	Produces bidis

Table 2: Detailed interviews NCL Colony

Initials	Date	Individual features
R. Ma	01.10.2011.	High debts, incongruent questionnaire
B. Ve	01.10.2011	Extreme high debts, high expenditures on alcohol, teen-age children have to work
B. Ye	01.10.2011	Male, has an disabled son (mute and mentally retarded), street food vendor with some chickens and vegetable plants
Bo	01.10.2011	Lost home in village due to floods, deaf and mute daugh-ter

Table 3: Expert Interviews

Name	Date	Institutional Background
Mr. Prakash	29.09.2011	Former social worker in Anna Nagar and Indiramma Nagar
Ms. P. Pushpa Rani	28.09.2011	Director of Ashritha, an NGO working in Bashirbad
Mr. Tarek and Mr. Manoj	28.09.2011	Social worker with Ashritha
Ms. V. Usha Rani	04.10.2011	Director of Sannihita, an NGO for women and children's rights
Ms. Supriya	05.10.2011	Former worker with Care India, now works on food security and nutritional safety
Ms. Rama Melkote	27.10.2011	Member of the State Advisory Council on Food Security, Founding member of Anveshi (Research Center for Women's Studies)
Mr. M. A. Shakeel	25.10.2011	Advocate and coordinator with Human Rights Law Network engaged in the right to food campaign
Mr. N. Sudhakar	25.10.2011	Oxfam India
Ms. Suneetha Prasad	18.10.2011	Director of Sraco (Society for rural awakening and community organization), a technical support organization working for 124 municipalities in Andhra Pradesh