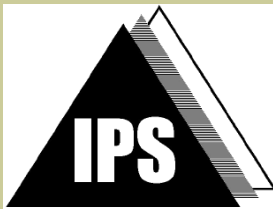




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***Community-Based Monitoring System
(CBMS) Network***

***Identifying the Urban Poor and
Investigating Local Level Dynamics
through CBMS: A Case of Colombo***

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Abstract

Identifying the Urban Poor and Investigating Local Level Poverty Dynamics through CBMS: A Case of Colombo

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The urbanization process in Sri Lanka has facilitated the movement of people from rural areas towards Colombo and its peripheral areas. Concentration of people and wealth in Colombo has generated new opportunities as well as new risks for city dwellers and has even led to an aggravation of some existing problems in relation to urban poverty. It is evident from recent data that nearly 20% of Colombo population are poor (Silva, 1998). There are nearly 1506 underserved settlements in the Colombo Municipal area with 66,021 housing units. A majority of these settlements belong to slum and shanty type of settlements, popularly known as low income settlements (REEL, 1998).

For urban development to be truly sustainable, the livelihoods of urban poor must be secure. On the other hand, poor people are exposed to a range of long term economic, social, natural and physical related risks. Moreover, poor people often have no capacity to protect themselves due to unrealised livelihood strategies i.e. inadequate assets, improper and unsuccessful asset management and lack of savings. Nevertheless, there are households that were 'poor and vulnerable' in the past, but have become 'better-off and secure' today owing to successful and proper asset management and accumulation strategies.

It is against the above background that the first part of this paper discusses the implementation of CBMS in an urban resettlement location, particularly focussing on the different steps in the training of community members, data collection, data processing, community validation, analysis, dissemination and also some challenges of institutionalising CBMS at the community level.

The second part of the paper will elaborate more on the indicators that were developed to identify poor and better off households considering five different types of vital household or livelihood assets (such as physical, human, economic, social-cultural) based on fieldwork carried out in a relocated urban settlement in Colombo. These exercises lead to a better understanding about different poverty dimensions at the community level in general and household level in particular. The data provides a good basis to monitor and evaluate different impacts of poverty reduction programs implemented by various government and non-governmental organizations at regular intervals in time using the 'community based monitoring system'. In light of the fieldwork this paper also argues that in general households are poor due to their lack of income diversification, income security and savings. However, there are situations where some households are poor due to the above mentioned reasons as well as some other factors such as hard drug addiction, alcoholics and chronic illness which are hidden sources of poverty.

Identifying the Urban Poor and Investigating Local Level Poverty Dynamics through CBMS: A Case of Colombo*

Introduction

The urbanization process in Sri Lanka has accelerated its pace during the past two decades largely towards the Colombo centre and its peripheral areas compared to other parts of the country¹. This has occurred under the impact of globalisation and economic liberalization policies and generated new opportunities as well as socio-economic and environmental problems for city dwellers and even deteriorated some of the existing problems, for instance, urban poverty, violence, crime, drug trafficking and even floods during the inter monsoon and southwest monsoon periods which require serious attention of urban authorities and land planners. According to recent sources, there are nearly 1506 slum and shanty settlements, mostly illegally constructed in state lands in the Colombo Municipal area with 66,021 housing units, which are popularly known as low-income settlements (REEL, 1998) and a majority of the urban poor live in the aforementioned settlements suffering from a combination of different dimensions of deprivations. Nevertheless, for urban development to be truly sustainable, the livelihoods of the urban poor must also be secure although this is a difficult task owing to the high degree of exposure to short and long term external risks, arising out of the above mentioned factors on the one hand, and low capacity of poor people to protect themselves from these risks due to inadequate assets, on the other.

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¹ Since the mid 80's Colombo experienced a rapid growth of its larger suburban areas. The Colombo district experiences a population increase of approximately 20% between 1981 and 1992 and has an urban population of more than 60% (whereas other districts are clearly below 15% of urban population) (Rajapakse 1996, Wanasinghe 1994). These numbers may even be higher, especially when keeping in mind that Sri Lanka does not have any proper definition of urban areas. The distinction between urban and rural division serves only administrative purposes and is being decided by the Ministry for Local Government without any binding criteria (Siddhisena/ Indrasiri/ Edirisinghe 1994).

Colombo City Flood Prevention and Human Environment Development Project (FPHEP)

In response to the above needs, the government relocated the shanty dwellers living on embankments of canals and slum settlements located in the vicinity of some of the selected canal banks in and around the Colombo Municipal Council region, with the intention of not only repairing and maintaining the canals in order to control flooding in the future, but also to improve the economic and social lives of these poor inhabitants. The Japanese government provided the funding for this project and the National Housing Development Authority together with the Land Reclamation and Development Board initiated the scheme. The illegal inhabitants who resided on the embankments of such canals were moved to seven locations (Sri Maha Vihara Mawatha, Badowita, Bathiya Mawatha, Obeysekarapura, Dematagoda Armaya Road, Kadirana Waththa and Wadugoda Waththa) situated in or around the immediate suburbs of the Colombo Municipal Council area. This was done with the intention of doing minimum harm to the exiting social relationships and livelihood activities of these persons. Under the above project, they were also provided with 1-2 perches of land and Rs. 20,000 in four instalments as an interest free loan to build their houses.

The Study Region - Badowita Low-income Relocated Settlement

“Badowita” is the largest relocated settlement under FPHEP project, situated in the Dehiwala - Mount Lavinia Municipal Council Region spread over thirty-five acres of land located under the Katukurunduwaththa *Grama Niladhari* Division². This settlement is divided into four stages (i.e. 1, 2, 3, and 4) and the number of plots allocated for each stage varies in relation to the extent of land allocated for the respective stage (Please see Table –1). The settlement was initially started in 1992 by relocating certain selected families to ‘stage 1’, while other stages commenced a few months later. The total

² Smallest administrative unit

say so, principals in the surrounding schools show reluctance to register our children in their schools and people cannot find decent employment”.

Conversely, some settlers say that the situation is now getting better compared to before because of frequent police hunts of drug peddlers and criminals by different police stations in the region. It is important to mention here that I personally observed such events throughout the study period.

The infrastructure of the main settlement consists of public as well as individual water and electricity connections for households. There are two Buddhist temples and two Christian churches in the settlement and also a few other churches functioning in some housing units. With regard to educational facilities, there are two national girls’ schools, one co-educational national school - both teaching up to A/Levels including science and maths subjects and one primary school, situated in the vicinity of the settlement. Furthermore, two pre-schools are situated within the settlement - one managed by the Dehiwala-Mount-Lavinia Municipal Council and the other by a Non-Governmental Organization. There are also nearly twenty-five small, medium and large-scale grocery shops and one private telecommunication centre in the settlement.

With regard to government institutions, the GN office, Water Board office and Garbage recycling office are also situated in the settlement

The Study Setting – Stage -2

In the past, the land in the present location had been used for paddy cultivation. In the late 1980’s the whole plot of land was taken over by the government owing to the abandonment of land from paddy cultivation. A few months later, the low level land was filled and prepared for the present settlement by the Land Reclamation and Development Board. One can enter the research site from two different roads: Wattrappala Road from Mount Lavinia and Attidiya-Dehiwala Road from Attidiya. The research location is well connected to the above main roads by either tarred or gravel roads with frequent public

transport for travelling to all directions. The study location comprises of 384 housing units in an area of 14 acres, with 1 to 2 perches of land for each housing unit. It is important to note that the Badowita resettlement project is surrounded by Villa Lotus Grove, Vajira and Keells – upper class private housing schemes.

It is against the above background that the first part of this paper briefly discusses the implementation of CBMS at the Badowita low income housing settlement focusing on the steps of community orientation, data collection, data processing, community validation and dissemination. While the second part will discuss the Experimental Livelihood security Index that was developed to identify poor and more affluent households considering five different types of vital household assets such as physical, human, economic, social and cultural - which are important livelihood assets, based on fieldwork carried out in a relocated urban settlement in Colombo.

Empowering Community through Participation in CBMS

In this section an attempt is made to discuss the main research steps that were followed and the relevant experience gained under each of these steps in conducting the field survey in a rather detail manner. A household interview schedule was constructed and pilot tested in stages 1,3, and 4 in four different types of households (i.e. always poor, always better off, earlier poor and now better off, earlier better off and now poor) during the first phase of the study. Moreover, twenty household interviews were conducted for each location (five households from each sub-category). In the household interview schedule, different types of household assets such as social, cultural, human, financial, physical and natural were explored. On the basis of fieldwork experiences gained from the pilot phase, the household interview schedule was further revised and translated into Sinhala.

Orientation and data collection

The Community Development Society (CDS) in the second stage of the location was selected as the local partner for conducting the field work for two main reasons: first, it is the main village based organization that initiated not only various infrastructure development programs in the settlements such as securing water and electricity supplies to the individual households and a solid waste disposal system for the community in collaboration with the relevant authorities such as National Water and Drainage Board, Ceylon Electricity Board and Dehiwala-Mount Lavinia Municipal Council. Secondly, they also implemented various social development programs by linking up with several external non-governmental organisations. For instance, several small-scale saving groups have been formed with the assistance of the Sarvodaya Economic Enterprise Development Program. A pre-school and a community library have also been established with the initial funds from Shanthi Foundation. In other words, this CBO maintains a very good relationship with government as well as non-governmental organizations. The collaboration that the CBMS team has established with the CBO is a good foundation to further empower this organization and continue with the planning and monitoring activities.

The CDC members were briefed on the objectives and uses of CBMS by the University team. Six Community Development Society members were trained in a half a day workshop conducted in the settlement, on the household interview schedule, particularly on different types of questions in the schedule as well as field logistics prior to conducting the field survey. It was also decided to recruit three graduates to assist community enumerators on the fieldwork component, as most of the community members did not have any prior fieldwork experience. This was expected to improve the quality of collected data.

Three research groups consisting of two community members and one experienced graduate assistant (to supervise and coordinate each group) were formed. During the fieldwork period, the graduate field assistants supported the community research

assistants in various ways to successfully complete the fieldwork. It took nearly one month to complete (From 2004/6/8 to 2004/7/8) the administration of household interview schedules in 384 households although there were 264 housing units in stage two of the settlements. This was due to the fact that there were many households with more than one family where they cook separately. As a result, the decision was taken to treat these families as separate households.

As regards the advantages of developing community members as field assistants under the guidance of graduate assistants, it was evident that most of the community members' were willing to provide the required information to local research assistants without any hesitation, as they already knew most of the household members in the community. Moreover, a good level of prior rapport that local communities have with the community members has helped to improve the quality of data. Local enumerators could also deal with sensitive questions such as those regarding hard drug addicts, alcoholics, different types of conflicts, and legal and illegal income sources of the household members.

Nevertheless, there were some instances where our enumerators were questioned by some household members specifically on the objectives of the research project, saying that, *“nothing is going to happen to us in terms of improvement of our lives even though a lot of studies have been conducted since we came to this settlement”*. This kind of response shows that there is a negative attitude towards social surveys on the part of some community members. Some respondents refused to provide information on income and savings suspecting that it would lead to a discontinuation of their monthly social benefits that they are presently getting from the government, i.e. Samurdhi. In spite of these difficulties, enumerators were able to administer the interview schedules and collect the relevant information, once the community members gained a clear understanding of the research objectives. Only three households refused to cooperate with us mentioning that they did not have time to devote to interviews.

It is important to note that the enumerators also got an opportunity to observe the actual in detail with regard to the living conditions in the community in terms of economic, health and social aspects.

Data Processing and Community Validation

Developing household socio-economic profiles of the location was the first objective of the data analysis as it will help us to understand household level poverty dynamics. Quantitative method of data analysis was applied in order to generate data in two different forms. They are:

a). Frequency distribution (Code Book)

b). Statistical indexes

a). **Frequency tables:** this analysis consists of all the relevant frequency tables that contain aggregate data on economic, social, political and health aspects of the community. Main patterns that emerge from data were first presented in a community forum for their validation. In this forum, the reasons for the findings were discussed. The Codebook, which consists of frequency tables that represent aggregate results of different household assets was constructed and translated into Sinhala. A short description explaining the patterns of frequency tables was also provided in simple Sinhala language for all tables. This was expected to enable community members to understand the statistical tables without much difficulty when they wished to utilize these data for various community-based action planning work.

The set of frequency tables was handed over to the community development society for information and perusal. It can be used by village level societies not only to identify various issues and problems with regard to their own community in general and households in particular in order to plan necessary interventions and other programs. This would facilitate a dialogue between public officials on the one hand, and community

members on the other. This would also help to identify issues and develop intervention programmes. For instance, a significant proportion of households in the urban location has identified the canal as a breeding ground for mosquitoes which has created other environmental and health problems such as dengue fever and filaria. Therefore, after the first presentation of results to a forum of government and non- governmental officials we are hopeful that the Land Reclamation Board would take necessary steps to clean the canal regularly and the Health Department in the Urban Council would take necessary steps to wipe out mosquito-breeding sites.

Maps constructed using GIS (Geographical Information System)

All the household data have been fed into GIS system and some maps have been constructed to visually present the salient features of the households in order to provide a general as well as specific understanding of the location. This in-depth understanding will help to identify relevant families that need special attention and care especially to overcome poverty. For instance, based on the data that was fed into the GIS system, we can identify and display households that have at least one or more school dropout youths in the settlement. As is well known, higher drop out rates are prevalent in low-income urban settlements and this could be facilitating the transmission of poverty from one generation to another. Therefore, identification of these households may help to minimize intergenerational transmission of poverty from one generation to another. This would also help to develop livelihood related skills development programs in the location with the assistance of government or non-governmental organizations or direct them to these types of courses in other locations. In other words, planners, community members, government authorities and non-governmental organizations can use this rich information to form various programs and other interventions with a spatial orientation.

Up to now, an attempt has been made to present implementation of CBMS in the Badowita location. The following section will examine the development of Experimental Livelihood Security Index (ELSI) using some indicators to identify poor families of the location. This will help various stakeholders to design and implement programmes and projects to move them out of poverty.

Index development

The Index developed here was constructed taking into account five different types of vital household assets such as physical, human, economic, social and cultural which are important as livelihood assets to identify poor and better off households. This exercise was expected to help the research team to obtain a clear understanding of different poverty dimensions at community level in general and household level in particular. The following section discusses in detail the steps that followed to identify better off and poor households in the urban location.

Experimental Livelihood Security Index (ELSI): Methodological considerations

There are two approaches to identify poor households: Firstly, to conduct a large scale, long term, quantitative survey in order to understand different characteristics of households at different periods in time by recording the changes in household assets and activity portfolios. This will help to statistically measure poverty by understanding how frequently households with particular characteristics experience distress and also measure the outcomes in the form of income and consumption at each period. On the other hand, some social scientists favour the identification of poor households by investigating the life histories of certain members of selected households as a qualitative method by exploring changes in their assets and activity portfolios over a long period of time. However, identifying poor households by a few individual in-depth interviews could be highly questionable due to the inability of generalizing the findings of individual in-depth

interviews of all the households at the study location and also due to the impracticability of this method for the use of development planners.

The approach pursued in this research combines elements of both these methods hoping that the weakness of both methods could be overcome by such an overlap. In the first phase of the study a detailed interview schedule was administered among the two hundred and eighty four (284) households in the study location. On the other hand, key informant interviews were also conducted in order to get clear understanding about the study community. As is well known, each and every data-collecting tool that one employs has its own advantages as well as disadvantages. Therefore, it is important to maximize the advantages especially with a view to improving the quality of data collected by applying more than one data-collecting tool. This is popularly known as ‘triangulation of methods’. Following the triangulation of methods system, key informant interviews, simple observation, structured and semi-structured interviews were employed as data collecting tools. On the other hand, in order to understand the community members’ point of view regarding poverty factors, a mapping exercise with selected key informants was carried out. In data analysis, ‘triangulation of analysis’ method was applied by analysing collected data using both quantitative and qualitative methods of analysis.

Table –2 Assets that are used to construct Urban Poverty Index

Physical assets	Economic assets
Owned land	Income security
Human assets	Income diversification
Educational attainment	Savings
Skills	Household composition: Labour force
	Debt
Household composition: Chronically ill	Socio-Cultural assets
	Household composition: Hard drug addicts
	Household composition: Alcoholics
	Membership in community based societies or other organizations

There is always an unavoidable element of subjective judgement in any such selection for the purpose of measuring household security level. It is important to note that each and every indicator can be placed under one or the other of the five assets in livelihood security analysis, i.e. human, socio-cultural, physical, and financial assets, For example, economic assets of households are represented by the indicators of labour force, income security, income diversification etc, while human assets are represented by the indicators of education, skills, etc. Household composition; alcoholics and drug addicts etc cover socio-cultural assets.

The index proposed here is developed in a specific empirical context and cannot be used in a very different setting without careful modification. However, the approach is somewhat generally applicable. For each household, each indicator assigned has an integer value in the range where minus four (-4) indicates a large contribution to livelihood insecurity and plus four (+4) to prosperity. All indicators are given the same weight in the index, so that the Experimental Livelihood Security Index is defined as,

$$\text{ELSI} = \frac{\text{Sum of variable values}}{\text{Number of indicators}}$$

The number of indicators in this case is twelve. Some of the individual indicators and values assigned are discussed in the following section.

Physical assets

a). Owned land

Land ownership is an important indicator for livelihood security as it serves as a security for bank loans, mortgages and can even be sold at times of crisis. Moreover, it can be used in order to start a home-based income earning activity. With regard to the total land ownership, any household that has more than 20 perches of land has been given the highest Value 4. Value 3 is given to households owning 3 to 20 perches of land. Value 2 is given to those owning at least 2 perches and Value 1 for 1 perch of land. There are families without a single perch of land in or outside the settlement and live either on rent or with their kinsmen in their households. Therefore, their degree of vulnerability to poverty is very much higher compared to other households in the settlement.

Human assets

a). Educational attainment

Sri Lanka's a free education system goes back to the early 1940's. However, studies have shown that it has been only marginally beneficial to the urban poor due to their high school dropout rates and low educational attainment (Silva and Athukorala, 1991). Formal education (from *Pirivena*³ or schools) is one of the most important aspects of human capital formation. Obtaining a good formal education may not only open up more opportunities for a person to acquire a good job with a reasonable salary but also leads to self respect and awareness. If there is at least one member in the household who has

³ Type of school conduct teaching in Buddhist temples

passed A/L, it is assigned 4, while, value 3 is assigned for households which have at least one member with O/L qualifications. If at least one household member has completed post primary education (grade 6,7,8,9 and up to O/L), then that household is assigned 2. Value 1 is given to households that have no members who have studied beyond the primary level, while 0 is assigned to the households with no formal education at all.

b). Skills

People acquire income-generating skills such as carpentry, masonry, motor mechanism, etc. as a result of informal and formal training. It is noteworthy that income generating skills of all household members are considered here including those of heroin addicts and alcoholics even though they are not actively involved in household activities. All household members with ordinary skills, i.e. gardening, cooking, house painting and polishing are assigned value 1. If one member of the household has formally or informally acquired skills except ordinary skills they have been given value 2. If two members in a household have two different skills or one member has two different skills value 3 is assigned. And value 4 is given to one household member who has three different skills or at least three members with three different skills.

c). Household Composition: chronically ill members

Household members who are either completely or partially disabled or suffering from chronic illnesses such as diabetics, hypertension, cancer, asthma etc. often incur a considerable additional expenditure. Therefore, (-1) is given if there is only one chronically ill member, if there are two chronically ill household members (-2), if there are three chronically ill family members (-3) and if there are four chronically ill household members (-4) are assigned respectively.

Economic assets

a). Income security

Bromley and Gerry (1979) have pointed out casual employment as a contributing factor for urban poverty in Third World cities due to lack of employment security and unstable income. Many casual workers are engaged in part-time work or do several casual jobs in order to live. They are very much dependent on contractors, suppliers, and other employers to find work owing to their lack of marketable skills, low literacy etc. On the other hand, they are also susceptible to any economic, social, political, ecological or technological changes, which may affect their work. Urban poor, even with skills, face difficulties to find secure employment due to poor access to information, facilities and opportunities. Some argue that casual employment would absorb unemployed household members in low-income settlements as a temporary solution for unemployment. However, if it becomes a permanent characteristic of a particular community, then it can become a root cause for several negative outcomes as well.

Household members in low-income settlements engage in legal and illegal types of casual employment. A daily paid labourer is a good example for legal casual income earning activity, while persons who work as helpers, peddlers, money collectors, transporters and spies in the areas of hard drug and illicit liquor trade are examples for illegal casual income earning activities. However, the second category is more insecure and is under greater threat than the former due to the high possibility of arrest and imprisonment.

The Income security factor refers to the main income generating activity including all legal and illegal (those who are engaged in heroin, other hard drug selling, illicit liquor selling etc) income generating activities. Among the different sources of income, it is understandable that certain sources of income are more secure than others. For instance, heroin or other hard drug selling and selling illicit liquor are more insecure income earning activities when compared to the income earned as a casual labourer or waste picker. Therefore, value 0 is given to households that do not have any secure income other than those illegal income sources and 1 is given to those who earn an income only

from unskilled casual work and unskilled self-employment. Value 2 is given to households that earn an income from one from skilled worker such as carpentry, masonry, motor mechanism etc or self-employment based on skilled work (for instance, small scale grocery shops). Value 3 is given to households, which have at least one member engaged in minor formal employment in private, government or NGO sector. For example Municipal Council Labourer, office helper or have a member engaged in a medium scale self-employment activities (shop owners and contractors). Value 4 is given to a household if there is at least one member engaged in full time formal employment in government, private or NGO sector either as clerks, salesmen, supervisors or for those who are engaged in large scale self employment work such as in grocery shops and with large scale concrete contractors.

b). Income diversification

Income diversification is an important indicator because the more diversified the household income, the more stable it is in stress situations. In other words, a household depending on a range of livelihood strategies and has a number of workers is less vulnerable and would recover faster from a household member losing a job compared to a household with only one income earner (Meikle, 2002). If two or more household members earn by engaging in the same income earning activity, it is counted as only one source of income. Monthly income from Samurdhi, pension and renting out rooms of the house are considered as another source of income. However, short term seasonal income earning activities such as selling Christmas cards during Christmas period or selling ready made garments for the New Year or during other festive seasons are not taken into consideration. Household members who earn from five or more different sources of income are given value 4 as it is assumed that they are economically better off compared to others.

c). Savings

Saving money by formal (government, private or non governmental organizational banks) or informal (saving in tins, *Seetu*⁴ etc) methods is a very important indicator as it helps to recover or to mitigate households in different uncertain situations without worsening the problem. People also purchase jewellery (movable assets) and other types of immovable assets as savings that they can use these in a uncertain situation. However, only the total household monetary savings are considered here and we did not consider other movable or immovable savings, as it is not easy to compare these in all households in the research location. Households that do not have any formal or informal savings in money are assigned value 0, while households with a saving of Rs. 30,000 or more is allocated the maximum value of 4.

d). Household composition: labour force

This refers to the ratio of the active to the dependent members of a household. For the purpose of the present study, the labour force is defined as persons who are between 10-65 years of age and who are able and willing to work. It is noteworthy, that 'active' does not necessarily refer to those who are engaged in income generating activities. All members who contribute to household livelihood are counted here including unpaid family workers and the elderly. Schooling children, household members who study full-time, imprisoned and unproductive elderly members as well as the non-income earning disabled are counted as dependents. The values assigned to these are ratios of -1, 0 and 1.

e). Debt

Loans can be obtained from informal (grocery shop owner, informal money lender etc) and formal (banks, work place etc) sources for various purposes such as physical, financial investments, household consumption, to purchase consumer durables or even to settle debts etc. What is important to note here is that even if people take loans for investments or other purposes, it could be a huge burden to the household members until the full amount is settled. The total amount of money that a household has to settle at the

⁴ A small group saving system

time of the research is considered here. Households that have to pay Rs. 30,000 or more are assigned the value of -4, while 0 is assigned to the households that have no debt.

Socio-cultural assets

a). Household Composition: Hard drug addicts

Heroin and other hard drug usage have been widespread in urban areas in Sri Lanka since the early 1980's due to the open economic policies after 1977. Relaxation of international trade restrictions has facilitated the inflow of hard drugs into the country and low-income settlements became the main distributional as well as marketing places for these drugs. As a result, the number of heroin addicts has increased particularly in the low-income settlements.

With regard to the study location situation, the data show that there is a significant proportion of male heroin addicts compared to their female counterparts. Heroin addicts normally inhale at least three packets per day, while some long time addicts inhale up to ten packets per day. At the time of the fieldwork, the price of one packet of heroin had increased up to Rs.250 from the earlier price of Rs.50. The price increases particularly during periods when the police conduct raids. Heroin addicts devote a significant part of their earnings on this, some even the entire monthly earnings without any or very little contribution to their household expenses. On the other hand, they also disrupt household activities by stealing valuables from either other household members, neighbours or even outsiders in order to buy daily dosage of drugs. This type of behaviour leads to arguments and violent activities, which disturbs family functions, and is also a disturbance for the whole neighbourhood. Therefore, domestic violence, crime and problems with law enforcement agencies are common in these households, while one can even observe hidden female-headed households⁵. The values assigned are -4 to 0 depending on the number of family members falling into this category.

⁵ It is important to mention here is that there are hidden female-headed households which consist of father and mother where father is not the main income earner and the decision maker of the household due to his heroin drug addiction, imprisonment or alcoholism... etc. Therefore, a single, nuclear or extended household headed by a woman as the main breadwinner or key decision maker in a household treated as a hidden female headed household.

b). Household composition: Alcoholic household member

Alcoholism is widespread among the community members and the majority of them consume illicit liquor. Household members who consume alcohol on a daily basis regardless of the amount spent on it are considered alcohol dependents. It is important to discuss some of the negative impacts of alcoholism on their household economy, as they devote not only their own earnings, but also ask or take from the earnings of other household members for alcohol consumption. These situations most probably lead to domestic violence. On the other hand, they are able to contribute less to household expenses and other matters. The values assigned are -4 to 0 depending on the number of household members who fall into this category.

c). Membership in community based societies or other organizations

It is argued that the poor households use social relationships and networks not only to survive but also to improve their livelihoods as a vital part of their livelihood strategies (Phillips, 2002). Membership in community based societies is important for vulnerable households as a part of above-mentioned social relations and networks as it provides social and material support not only in crisis situations such as death, illness, etc., by financial or mutual help but also in assisting the poor to develop their skills, knowledge, increase their access to resources, which facilitates employment and various other benefits, i.e. to get more infrastructure facilities for their respective locations which would help them directly and indirectly to reduce vulnerability and poverty (Rakodi,1995). This is an important reason as to why the majority of urban poor have recognized the importance of being involved in CBSs and demand improvement of their community (Sevanatha, 2002).

There are various Community Based Society's active in the settlement which are generally aimed at settlement development through various activities. Death Donation Society, Community Development Society, small scale savings and credit societies (i.e. Sarvodaya Economic Enterprise Development Societies) that function under some external support from different non-governmental organizations and different political

party societies are some examples for socially active community based societies in the settlement. On the other hand, there are few socially inactive CBSs in the settlement. Therefore, only membership in socially active community based societies is counted here. If one household member holds membership in four different CBSs or four household members hold membership in four different communities based societies they are assigned the maximum value of 4.

Table-3 The index key and assigned values

Values	0	1 (-1)	2 (-2)	3(-3)	4(-4)
Indicators					
Owned land	No land property in or outside the settlement	Owned only 1 perch (1)	Owned 2 perches of land (2)	Owned 3-20 perches of land (3)	More than 20 perches of land (4)
Educational attainment	No member has any formal education	No member studied beyond grade 5 (1)	At least one member completed grade 6, 7,8,9 or up to O/L's (2)	At least one member passed O/L (3)	At least one member passed A/L (4)
Skills	No member has any formally or informally acquired skill	All ordinary skills (1)	At least one member has formally or informally acquired skill (2)	At least two members have formally or informally acquired different skills or one member has two different skills (3)	At least three members have different skills or one member has three different skills (4)

Household composition: Health	-	One chronically ill household member (-1)	Two chronically ill members household (-2)	Three chronically ill household members (-3)	Four chronically ill household members (-4)
Income diversification	One source of income	Two different sources of income (1)	Three different sources of income (2)	Four different sources of income (3)	Five or more different sources of income (4)
Income security	No source of secure income	Income only from unskilled casual work, unskilled self employment	At least one income from skilled work or self employment based on skilled work	At least one minor formal employment in either private, government or NGO sector or medium scale trade owners and contractors	At least one full time formal employment in either government, private or NGO sector or large scale grocery shop owners or contractors
Savings	No sources of informal or formal savings	Rs. 1-9999 (1)	Rs. 10,000-19,999 (2)	Rs. 20,000-29,999 (3)	Rs. 30,000 or more (4)
Household composition labour force	Equal number of active and dependent members	More active members (1) ----- - More dependent members (-1)	-	-	-

Household composition: Alcoholics	-	One alcoholic in the household (-1)	Two alcoholics in the household (-2)	Three alcoholics in the household (-3)	Four alcoholics in the household (-4)
Household composition: Hard drug addicts	-	One hard drug addict in the household (-1)	Two hard drug addicts in the household (-2)	Three hard drug addicts in the household (-3)	Four hard drug addicts in the household (-4)
Debt	No debt	Rs. 1-9999 (-1)	Rs. 10,000-19,999 (-2)	Rs. 20,000-29,999 (-3)	Rs. 30,000 or more (-4)
Membership in community based societies or other organisations	No membership	At least one household member is a member of one CBO (1)	At least one household member is a member of two different CBOs or two household members have membership in two different CBOs (2)	At least one household member is a member of three different CBOs or three household members have membership in three different CBOs (3)	At least one household member is a member of four different CBOs or four household members have membership in four different CBOs (3)

Table 4: The Experimental Poverty Index for some selected cases

Id	Owned land	composition : Labour Force	composition : Health	composition : Alcoholics	composition: Hard drug addicts	Income diversification	Income security	Savings	Debt	Educational attainment	Skills	community based societies	ELSI
84	2	-1	-1	0	0	0	0	0	0	0	1	0	0.08
102	1	-1	0	0	-2	0	1	0	0	1	1	0	0.08
20	2	0	-2	0	-2	1	1	0	0	1	1	0	0.17
38	2	0	-2	-1	0	0	1	0	0	1	1	0	0.17
157	2	-1	-1	-1	0	1	1	1	-2	1	1	0	0.17
167	0	-1	-1	0	0	0	1	0	0	2	1	0	0.17
22	0	-1	0	0	-2	1	1	1	0	2	1	0	0.25
27	0	-1	-1	0	0	0	1	1	0	2	1	0	0.25
32	0	-1	0	0	0	0	1	0	0	1	2	0	0.25
101	1	-1	-1	0	0	0	1	0	0	2	1	0	0.25
131	0	0	-1	0	-1	0	3	0	-1	2	1	0	0.25
135	0	0	-2	0	0	0	1	0	0	3	1	0	0.25
151	0	-1	-1	-1	0	1	1	0	0	2	2	0	0.25
158	0	-1	0	-1	0	0	2	0	0	2	1	0	0.25
204	0	-1	0	0	0	0	1	0	-1	2	2	0	0.25
221	2	-1	-1	0	0	2	1	0	-4	2	1	1	0.25
2	2	-1	-1	0	0	0	1	1	-1	1	2	0	0.33
10	2	0	0	-1	0	0	1	0	0	1	1	0	0.33
13	0	-1	0	0	0	0	2	0	-1	2	2	0	0.33
21	2	0	-1	0	0	0	1	0	0	1	1	0	0.33
70	2	-1	-1	-1	0	0	4	0	-3	2	2	0	0.33
28	2	1	-1	0	0	2	4	1	0	2	2	3	1.33
57	2	0	-2	0	0	3	4	4	0	2	4	0	1.42
73	2	1	0	0	0	2	4	1	0	3	3	1	1.42
93	2	1	-1	-1	0	4	4	4	-3	1	4	2	1.42
250	2	1	0	0	0	1	4	4	-1	3	2	1	1.42
89	2	1	-1	0	0	4	4	1	-1	3	4	1	1.5
194	2	1	-1	0	-1	3	3	4	0	2	4	1	1.5
239	2	-1	-1	0	0	1	4	4	0	3	4	2	1.5
251	2	1	0	0	0	2	3	3	0	3	4	0	1.5
59	2	1	0	0	0	3	3	2	0	3	4	1	1.58
72	2	0	0	0	0	2	4	1	0	4	4	2	1.58
92	3	1	0	-1	0	2	4	4	-1	3	1	3	1.58
257	2	1	-1	0	0	3	4	4	0	4	3	0	1.67
274	3	1	0	0	0	4	4	2	0	3	4	0	1.75
258	4	1	0	0	0	2	4	4	0	3	4	0	1.83
246	2	1	0	0	0	3	4	4	0	2	4	4	2

The values of the ELSI for some selected households ranked in ascending order are presented in Table 4. The mean value of the index is 0.79, with a standard deviation of 0.34. As expected, the index is strongly associated with income security (Pearson's $r = .625$), income diversification (Pearson's $r = .570$), savings (Pearson's $r = .580$) and skills (Pearson's $r = .538$), and statistically significant at .01 level. Furthermore, the relationship between educational attainment (Pearson's $r = .442$) and land ownership (Pearson's $r = .439$) are moderately correlated and statistically significant ($p < .01$) with the index. In other words, households with a combination of secure and more diversified sources of income, more savings and more skills are concentrated towards the lower end of the index. It is important to note that even though there are few chronically ill household members in the better off households (eg. Id 239, 194 and 89), the negative impact of those members is low due to the strength of other positive factors such as income security and more diversified sources of income etc. On the other hand, households with a combination of chronically ill members, with no secure and diversified income sources, hard drug addicts and alcoholics are concentrated towards upper end of the index.

In order to confirm the findings of the index and also to get people's ideas about poor and vulnerable households in the location, a mapping exercise was carried out with certain selected members in the location. In this exercise, the selected members were first asked to identify the main characteristics of the poor and least better off households in the location and then to identify and mark them on the location map that was given to them. It is worth mentioning that people had identified households with heroin addicts, alcoholics, more dependents, low education and one source of income which is mainly from casual employment as the main characteristics of the poor households. The better off household characteristics had different sources of legal income earning activities, no unnecessary expenses on heroin or alcohol, and moderate education. Finally, I cross-checked the identified poor and better off households with the index, which I had developed. It is important to note that there is not much difference. Therefore, I can conclude that the ELSI gives a reliable picture of the actual situation.

Conclusion

In the first part of this paper, I have briefly discussed the implementation of CBMS at Badowita low income housing settlement focusing on the steps of community orientation, data collection, data processing, community validation and dissemination.

While in the second part of this article an attempt has been made to answer the question of how poor people can be targeted and identified. Based on the field study, by applying both qualitative and quantitative data collecting tools, a quantitative index of livelihood security is formulated in order to measure household poverty level in the study setting or to rank them according to their livelihood security level. The matrix proposed here deals with five different types of vital household assets such as physical, human, economic, social-cultural. It is noteworthy that under clearly defined situations, this type of index may be helpful to identify poor households in a study location. However, there are some serious methodological issues that need to be addressed. For instance, how the indicators showed be weighed in relation to another is completely open and these relative weights depend heavily on the definite situations in the study location.

In relation to the findings, it is clear that in general, households are poor and vulnerable due to their lack of income diversifications, income security and savings. However, there are situations where certain households are poor due to the above mentioned reasons as well as some other factors such as hard drug addiction, alcoholics and chronic illness which are hidden sources of poverty. Considering the fieldwork done, one can argue that the use of household income as an indicator of poverty especially in relation to the urban context needs further research.

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