

"Social Inclusion and Energy Management for Informal Urban Settlements (SES)"

Case studies review

In this newsletter we present the review of three SES case studies. All the case studies will be published in the project website.

Case Study Review

Household Energy Management in Informal Settlements of Addis Ababa

Author: Abnet Gezahegn Berhe

Review performed by Cheryl de Boer, ITC: University of Twente

This case study sheds light on the contextual factors relating to the energy use and management behaviours of households located in informal settlements in Ethiopia. The study is based off of data collected from 4 different informal settlements in Addis Ababa considered to be representative of most informal settlements within the city. These settlements chosen are Gedam Sefer, Goro, Selem Sefer and Ayat. The researchers were particularly interested in how availability and affordability of different types of energy impacted the energy use behaviour of the households in the case study area. Through better understanding the connection between

affordability/availability and use, the researchers sought to be able to provide support for increasing the accessibility and use of modern/renewable electric for those living in informal settlements. This is seen as being advantageous from environmental, social well-being and health perspectives.

The informality of the selected cases was suspected to pose a particularly important problem with respect to energy accessibility. As modern energy is supplied via city infrastructure, access to these services was expected not to be easily or formally available to the residents.

The informality of the settlements formally prevents engagement from the municipal service authorities due to a lack of a mandate, making it all the more difficult to alleviate or improve the situation. This precarious situation was seen to encourage electricity theft among the residents and lead to the development of illegal and thus often unjust pricing/sales tactics from those taking advantage of the situation. The result is that sometimes those considered among the poorest, are being required to pay proportionally more for their energy use. The results of this research would provide additional understanding of the extent to which these relationships impact the lives of the inhabitants and how it could be improved.

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In order to collect the data, the research team first performed arial reconnaissance to update maps and clarify the parameters of the study areas. This was followed by interviews of 520 households within the 4 case study areas and a final focus group discussion providing a detailed picture of the energy management practices taking place.

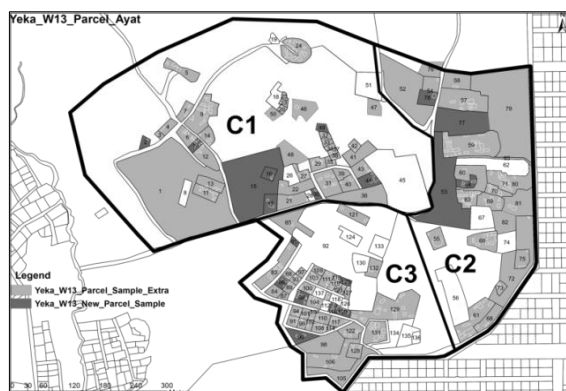


Figure 7 from Case Study: Showing Parcellation map of the Ayat site prepared based on 2003 topographic map

In terms of availability and connections to the electricity grid, a surprisingly high percentage of households have a connection to the main grid (the case studies ranged from 74%-97% connection rates). This was surprising since a title deed is officially required in order to receive a connection, and only 48% of all residents have a formal title deed. Further investigation into this matter is recommended though it appears a series of loopholes have been used to acquire access to the main grid (and in some cases getting access to the grid is then the mechanism from which to acquire title deed). It appears that some of this can be explained by the special involvement of NGO's which supported electric meter acquisition for many households. In some cases access options were also initiated by

the government and community, which shows the high potential of social bonds and community involvement to overcome the hurdles caused due to the informality.

With respect to affordability 60% of the households with lower income were found to spend more than 15% of their earnings on energy expenditure, while 70% of the households earning monthly income of more than 2,044 (thus higher income) actually spend less than 10% of their income on energy expenditure. Households with relatively lower income in the case study areas struggle to afford energy. One main factor contributing to this is that those with higher incomes are more likely to have their own electric meter and they then sell out electricity as a source of income. According to the FGD respondents, a single household sells electricity for 25 birr per single bulb or light point per month, and this is significantly more expensive in comparison to the normal tariff which is only 2 (1.94) birr.

As mentioned one of the main interests of performing this research is to improve the environmental impacts of energy use through increased accessibility of electricity. It was found that currently 66% of the respondents have increased their use of hydroelectric main grid power for cooking and light since they moved in the case study area. Further, 53% and 34% of the households have shifted from using firewood and charcoal respectively due to health hazards showing more awareness and demand for modern energy. The major cause of fire in the case study areas is cooking fire hazard (38%) followed by faulty electricity connections (25%). Respondents in the case study area also indicated that electricity connected accidents are common

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and that most causes of electrocution are related to the mismanagement and tapering of the main power grid lines.

The respondents also put the need to acquire reliable, affordable and modern energy on the top of their list of aspirations and expectations from the neighbourhood. The respondents also revealed that the increase in main grid connection in the settlements over the course of their stay improved their neighbourhoods in many aspects.

Table 11 from the case study - Impact of increase in main grid Connection

		Increased Income	Better Health	Better Security	Change of Land Use
Site	Gedam Sefer	23.9%	21.8%	54.3%	0.0%
	Ayat	42.1%	21.0%	21.0%	15.8%
	Selam Sefer	27.9%	27.1%	34.9%	10.1%
	Goro	23.4%	36.6%	40.0%	0.0%
	Total	27.7%	26.8%	38.4%	7.1%

The study concludes with recommending full exploitation of the existing social bonds and community involvement in order to achieve universal access for modern energy in the case study areas. Settlers in the case study areas were found to be predominantly law-abiding citizens with an acute shortage of housing. The Addis Ababa city administration is encouraged to take the lead in housing and infrastructure provision through a shift to self-help, community involvement and controlled development.

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Case Study Review

Social Capital across Different Neighbourhood Settlements in Gondar Town

Authors: Bekele Molla and Hone Mandefro

Review performed by Javier Martinez, ITC: University of Twente

This case study compares the stock of social capital across residents of three neighbourhood types in Gondar Town. They are classified as inner-city slum (Enkoye Mesk), out squatter settlements (Genfo Kuch) and condominium (Aba Samuel Condominium). Social capital is understood as a relevant element of sustainable and thriving communities. The study found that the perspectives of residents across the different settlement areas are similar. On the other hand, condominium residents have the lowest social capital in Gondar. The vertical nature of condominium and the different backgrounds of the residents also contributed to the low social capital.

This study is of relevance since, in the last decade, the Integrated Housing Development Program (IHDP) has built several gated and multistory apartment buildings (condominiums) in major cities

across Ethiopia. However, there is concern that the social capital of residents is affected as residents are moved from slums into the newly built condominiums.

The authors of this case study explored perspectives about social capital; compared social capital across the three different neighbourhoods and identified factors that affect social capital. Furthermore, they assessed the unique features of a condominium and how they affect social capital. The case study followed a mixed-methods approach with a predominance of qualitative aspects. The methods included questionnaire surveys, focus group discussions and in-depth interviews. A total of 120 household heads were randomly selected for the survey. Statistical descriptive analysis, including correlations, were used to analyse the surveys. The qualitative data were analysed thematically and with content analysis.

The finding of the study shows that there is no difference in perspectives and views across the three different study sites, i.e. inner-city slum (Enkoye Mesk); out squatter settlement (Genfokuch); and condominiums (Aba Samuel Condominium). Though the natures and types of settlements are diversified, the residents view about what constitutes a “good neighbourhood” across the three settlement areas are similar. This shows that the nature and type of settlements have little impact on the residents’ view about a “good neighbourhood”.

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The social capital, was measured through four dimensions, social network, neighbourhood behaviours, trust and neighbourhood attachments. In all four dimensions of social capital, condominium residents' social capital is the lowest. The findings indicate that condominium residents are mostly participating in a single social network Ikub, a temporary traditional saving association. This participation is it is temporary and mainly conducted in the workplaces. According to the authors, this is because of the lack of interest in establishing such networks due to the uncertainty and threat of eviction. The research mentions the caveat that this result needs to be substantiated with a larger sample and after controlling all intervening factors (income level, age, gender). The mean comparison in the three dimensions of social capital, i.e. in neighbourhood behaviour, trust and neighbourhood attachment, shows that condominium residents have the lowest social bond among themselves than inner-city slum and out squatter settlements.

This case study also concludes that the unique features of condominiums also contributed to the weak social bond among residents. Some of the unique features affecting social capital are the vertical characteristics of the condominium (built as multistory apartments), as well as the diverse background of the residents and employment characteristics of the residents (such as government employee who spend most of their times in the workplaces). The

nature of the condominiums and its residents hinder the establishment of social capital, unlike other forms of settlements.

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Case Study Review

The new face of Addis Ababa: Towards narrowing the gap between the persistence of informality and emerging prosperity

Authors: Tsion Lemma Mamaru

Review performed by Mark Brussel, ITC: University of Twente

This interesting case study addresses the many challenges associated with fast urbanisation, in particular those faced by Addis Ababa, where the government, in line with its Growth and Transformation Plan, is pushing the urban sustainable development agenda through massive infrastructure and housing development, targeting low and middle-income people. Despite these fast and numerous interventions, the planned targets have remained out of reach and the fast urbanisation has led to the further proliferation of informal settlements and a widening gap between the poor and affluent parts of society. The author notes that there is a mismatch between defined broader planning goals and the actual realisation of inclusive and integrated development.

Against this background, the author argues that a new holistic planning and design strategy should be developed that is based on up-to-date and realistic information. To contribute to the planning and design thinking that is required, the author suggests that it is needed to better understand informality and disparity; how it forms, how it persists and how better planning practices can lead to more inclusive contextual development.

In elaborately discussing the literature on informal development, the author shows that new ways of thinking have emerged which centre around more hybrid, contextual and systemic approaches. These are considered essential for understanding local conditions and then furthering this understanding into local planning initiatives.

As study areas, four informal settlements in Addis Ababa were analysed to get a better understanding of the socio-spatial-temporal changes and their planning-related causes. In this analysis, a myriad of both primary and secondary data sources was used and qualitative and quantitative methods were combined. Data sources included maps and satellite images, interviews of key informants and household surveys. An example of one of the areas, Gedam Sefer, can be seen in the image below.

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Gedam Sefer area

To get an understanding of growth in Addis Ababa, satellite image analysis was performed. Interestingly, this analysis showed that urban growth picked up considerably after 2011 at the scale of the entire city. This trend could also be witnessed in each of the four case study areas. In the three informal areas more than half of the population settled after 2011, the main causes for this, next to migration, being the demolishing of inner-city residential areas and the provision of title deeds in the informal settlements.

Satellite image interpretation was used to identify changes in spatial characteristics in the areas through the analysis of morphological features. Elements such as density, building size, and pattern were

analysed. This showed that in all areas a hybrid situation of both formal and informal housing could be witnessed.

In the four areas also socio-spatial disparities were analysed, by looking at physical accessibility, transport provision, drinking water, electricity and tenure security. This analysis showed a wide variability within and between the areas for most of these factors, further illustrating their heterogeneity and that of the service levels experienced by their inhabitants. A case in point is the level of tenure security of the inhabitants which varies from a title deed to no form of security within each settlement. Also, highly interesting are the reasons why people are moving into these settlements, the most important ones being affordable housing, family relations and job opportunities.

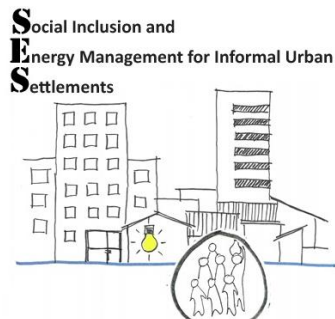
A historical analysis of master plans showed that, although many housing programmes were implemented, these planning initiatives taken were unable to address the overall shortages in affordable housing and reduce the persistent informality.

In conclusion, the author points out that implemented policies and urban planning responses over the years have contributed to the proliferation of informal settlements. In particular their lack of a holistic planning view, including technical and financial mechanisms, and insufficient institutional embedding.

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The author claims that the variability witnessed in slums requires a combination of contextually feasible approaches, not a kind of one-size-fits-all approach.

To do this, an in-depth understanding of the existing realities is imperative. Also, better integrated and holistic planning and design strategies, tools and processes should be implemented at national, regional and city level, which would involve the collaboration of various stakeholders including the city residents who are the main beneficiaries.-



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