This is a peer Reviewed Pa Ashokkumar SHRESTHA, Dr. Purna NEPALI, Mr. Uma Shanker PANDAY, Nepal and Ms.

Reshma SHRESTHA (The Netherlands)

Key words: Livelihoods, Tenure Security, Squatter Settlements

SUMMARY

Squatter settlements are inevitable in most of the urban areas. Livelihood situation of squatter settlements seem poor, vulnerable and miserable. Living condition in these settlements suffered from overcrowding, inadequate accommodation, limited access to clean water and sanitation, lack of proper waste disposal system and degraded air quality.

Using case study approach in the selected study area along the Bagmati river bank in Kathmandu city named Thapathali Squatter Settlement (TSS), Shankhamul Squatter Settlement (SSS) and Kirtipur Squatter Resettlement (KSR), this paper presents the livelihood of squatter settlements and analyze from tenure security perspective. Moreover, this paper basically attempts to understand and analyze livelihood situations of the squatter settlements with reference to tenure security. Specifically, it includes the importance and the role of tenure security in squatter settlement with regard to livelihood, as well as to analyze improvement of it over the past 10 years. Data for the paper were collected from both primary and secondary sources.

The paper has successfully evaluated and analyzed livelihood situations of the squatter settlements with reference to tenure security. The analysis result shows that the improvement level in TSS is negative in regard to key dimensions of the slums and squatters. Relatively, SSS has improved. Being the resettlement, KSR is achieving the key dimensions of the slums and squatters. In the continuum of land rights, TSS is found to be in the condition of perceived secure land tenure. Unlike it, SSS has the condition of De-facto land tenure and KSR is in the condition of legal tenure. The major problems in improvement of squatter settlement process found in the study areas are: lack of coordination among government agencies, NGOs/INGOs and the local squatters, lack of specific policy of the government, lack of planed resettlements, and desire of the squatters to settle in the middle of the town.

This paper identifies that practice by the government and fears of eviction are the main causes of the squatters' planning of the physical structure of their houses. Specific policies are to be applied by the government for the betterment of the squatters and for prevention of the formation of squatter settlements. It is recommended that identification and categorization of genuine squatters at local level can be the promising way of studying them and they should be resettled. Consequently, participatory resettlement of squatter settlement is suggested for betterment of their livelihood and to ensure their land tenure security.

Livelihoods of Squatter Settlements: Analysis from Tenure Perspective

Ashokkumar SHRESTHA, Dr. Purna NEPALI, Mr. Uma Shanker PANDAY, Nepal and Ms. Reshma SHRESTHA (The Netherlands)

1. INTRODUCTION

Land is a cross-cutting issue. Along with the development works, there are different types of settlements in different areas. Basically in the urban areas, there are slums and squatters developed simultaneously with urbanization. These settlements have affected the living conditions of those people because there are less facilities and services; and the settlements are deprived of land tenure rights. In the recent years, migration has led to population growth in many cities especially in developing countries (Nandi, S. and Gamkhar,S., 2013). According to the studies, in the early 1990s, 40% of the people were living in the urban area whereas the number increased by 10% (WHO, 2013) at the end of the year 2010. It is predicted that the increment is unstoppable.

There are many haphazard residential settlements and built up areas which have brought serious problems like continuity of informal settlements, increased gap between rich and poor people, lack of tenure security, and unsustainable land use (Kotter, 2009). There is always conflict between unplanned urban growth and limited accessibility of land in the urban areas (Ying, S. *et al.*, 2011). Similar to other countries, there is rapid growth of urbanization in Nepal in the recent years. Especially in Kathmandu Valley, the population increased from 1,645,091 to 2,517,023 within 10 years (CBSN, 2011). A major reason for this increase is rural-urban migration. Most of the people in rural areas are attracted to cities due to pull factors like better education, economic opportunities and other facilities. Also, push factors like lack of medical facilities, natural calamities forces people to leave their native towns (Shrestha R. , 2014). Due to the scarcity of land, settling in the public land has brought numerous problems such as environmental degradation, conflict between the residents and the government, and loss of open space in Kathmandu Valley (Haack, B.N. and Rafter, A., 2006).

There are push and pull factors that causes rural to urban migration. The push factors are lack of access to land in which many people find themselves in a situation of economically insecure. Similarly, the push factors are better jobs, health, education and other facilities. However, due to lack of affordable land and housing, lack of employment opportunities the migrant population left to squat and build their shelters on public land and other environmentally sensitive areas like riverbanks or flood plains, steep slopes and vacant spaces under high-voltage electrical transmission line. Besides, the failure of the rural economy and displacement of people for various reasons, including natural disasters and conflict, are the two major causes for the increase of slums and squatter settlements in the valley (UN-HABITAT, 2010).

The study of (Shrestha et al., 2016) has also shown that the population that squat are not legally legitimate however, there is tendency towards socially legitimacy due the actions of various government and civil groups. The failure to close the gap of social legitimacy and legal legitimacy

has been the major issue. The legal legitimacy refers to tenure security from legal perspective where as social legitimacy is about tenure security from livelihood aspect.

2. OBJECTIVE

The general objective of the study is to examine livelihood of squatter settlements, focusing on tenure security.

3. CASE STUDY AREAS

The study areas are well known all over the country. The three different case study areas are selected, namely: Shankhamul Squatter Settlement (SSS), Thapathali Squatter Settlement (TSS) and Kirtipur Squatter Resettlement (KSR).

It covers the squatter settlement along the Bagmati river bank in Kathmandu city. Shankhamul Squatter Settlement (SSS), Kathmandu was started in 1971 AD by the efforts of 45 persons led by Mr. Hukum Bahadur Lama. But Thapathali Squatter settlement (TSS) is new (>10 years) in comparison to SSS. It lies in the geopolitical boundary between Kathmandu and Lalitpur district of Bagmati zone on the central development region of Nepal.

The KSR was evicted from Bishnumati river bank's squatter settlement as Kirtipur Housing Project (KHP) in Kathmandu. Three communities were used to settle on the river bank, one established as early as in 1952. Afterward two new communities were formed in 1993 and 2000 totaling to 142 households (HHs). None of these people had formal title to the land, planning or building permission and were officially regarded as squatters (Lumanti, 2001).

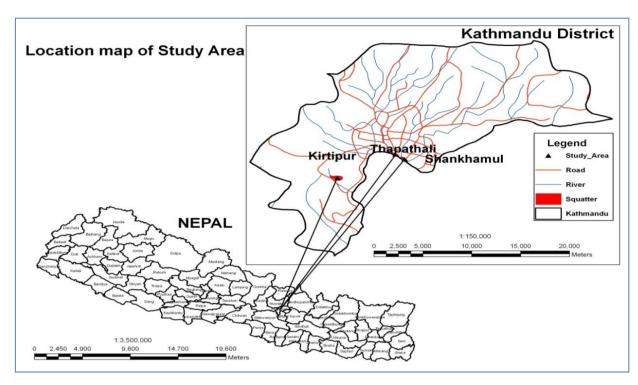


Figure 1: Case Study Area, SSS, TSS and KSR,

Kathmandu, Nepal

The KHP, the first initiative to relocate 44 households evicted from their settlement as a result of Vishnumati link road project in Kathmandu. It has purchased six ropanies (equivalent to 32,856 ft2) at Kirtipur Municipality. It is away from ten kilometer from the centre of the city. The affected communities who were supported from Lumanti NGOs and civil groups put forward their resistance. The KHP is widely hailed as a success story as it has able to provide legal, affordable and adequate quality of housing units to squatters in line with the united nation's MDG 7, Target 11 that aims to improve the living conditions of 100 million slum dwellers by 2020 (Lumanti, 2001).

Table 1: Contextual Background to the Case Study Settlements

Case Study areas	TSS	SSS	KSR
Location	Thapathali,	Shankhamul,	Kirtipur Municipality-6,
	Kathmandu-11	Kathmandu-10	Kathmandu
Established year	>10 years	>30 years (old)	>10 years
No. of HHs	127	105	44
Total Population	Not available	503	Not available
Ethnic Groups	Mixed	Mixed	Mainly Shahi

(Source: Field Survey 2015)

At present, 105 HHs in Shankhamul Squatter Settlement (SSS), 127 HHs in Thapathali Squatter Settlement (TSS) and 44 HHs in Kirtipur Squatter Resettlements (KSR). In the case of TSS, all

Livelihoods of Squatter Settlements: Analysis from Tenure Perspective (8536) Ashokkumar Shrestha, Purna Nepali and Reshma Shrestha (Nepal)

FIG Working Week 2017 Surveying the world of tomorrow - From digitalisation to augmented reality Helsinki, Finland, May 29–June 2, 2017 structures are <10 years old, Whereas residents of SSS have perceived high level 'de facto land tenure' because they have been residing in the present location for more than four decades and socially recognized (Shrestha, 2013).

4. METHODOLOGY

The study is based on qualitative method of data collection and analysis. Qualitative research methodology aims to explore people's feelings, perception and experiences of particular events and phenomenon more closely (Limb, M. and Dwyer, C., 2001). The researcher has used interpretive paradigm to analyze the data obtained from the field. Three phases are conducted during the research as follows:

4.1 Pre-field work

The research starts with the preliminary survey of squatter living people in SSS, TSS and KSR for making concept of research proposal which makes easy to formulate research objectives and research questions. Research questionnaire and sampling procedure are prepared for the respondents. Out of 105 HHs in SSS, 127HHs in TSS and 44 HHs in KSR, 35 respondents from each study area were selected using purposive non-random sampling method. This phase contains the literature review with respect to the research objectives and preparation for the field work. This phase is concerned with the desk study.

4.2 Field work

Both primary and secondary data are used for this study. Sample of the respondents is taken using purposive non-random sampling method. First, the respondents are selected from the study area on the basis of the objectives developed in this study. Data collection includes personal information, condition of physical infrastructure, socio-economic situation of dwellers and their views on improving settlements and on land tenure security. Numerous formal and informal meetings and discussions were also held with the concerned stakeholders working in public organizations, private organizations and NGOs. The local squatters, Local NGos (such as Lumanti, Nepal Basobas Basti Samrakchan Samaj, Nepal Mahila Yekta Samaj etc.) and professionals of concerned organizations are interviewed to obtain information for fulfillment of the research objectives as well as, observed the livelihood condition of squatters. Secondary data are collected from books, journals, policy review, scientific literatures, conference paper and other published material which help to find out the appropriate way of improving the livelihoods of squatter people in SSS, TSS and KSR.

4.3 Post field work

This phase of the study is for data management, data processing and data analysis which are carried out for the final conclusion and recommendation. Qualitative data aims to achieve respondent's understanding from. In it, interpretation of the meanings of people's experiences, behavior, practices and actions are focused. In the present study, the researcher has analyzed the data collected from primary sources; basically interview with the respondents and observation of the study area.

Similarly, secondary sources are also used to locate the study in livelihood framework in regard to tenure security and livelihood.

RESULT AND DISCUSSIONS

This research basically attempts to understand and analyze livelihood situations of the squatter settlements with reference to tenure security. Specifically, it includes the importance and the role of tenure security in squatter settlement with regard to livelihood, as well as to analyze improvement of it over the past 10 years. The research mainly focuses on livelihoods based on five key dimensions for improvements according to UN-HABITAT in Guide to Monitoring Target 11: Improving the lives of 100 million slum dwellers and tenure security in terms of continuum of land rights. According to UN-HABITAT, the five key dimensions for improving slums and squatters are: "access to safe water, access to sanitation, secure tenure, and durability of housing and sufficient living area".

5.1 Tenure Security and Livelihood of Squatters

Various researches have been increasing positive outlook towards the slums and squatters in the world, there has been a lot of growing realization of the need to provide secure tenure to these inhabitants. At present, security of tenure is considered as the main component of the right to housing. Having known that secure tenure provides the authority to reside in a place without threat of forceful removal or eviction (UN-HABITAT, 2003). Legal title is the best way of assure tenure security (De Soto, 2000). Thus, Land tenure security is found important in upgrading livelihood of the individuals. There is always the fear of eviction in study areas. Government's eviction policy and fear of eviction are the main causes of the squatters' planning of the physical structure of their houses. The squatters are afraid of eviction anytime. So, they are not willing to make the permanent structure for living. SSS and TSS are weak about future plan of their house and properties for improvement. The study has showed that they are unsecured from the fear of eviction. No one was found willing to improve their settlement due to fear of eviction (Figure: 2).

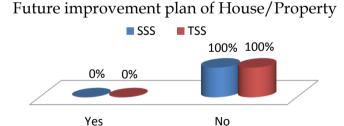


Figure 2: Future improvement plan of House/Property in SSS and TSS (Source: Household Survey 2015)

No

Secured land tenure has improved living standard of the respondents. The settlements without land tenure security are less developed and people are reluctant to construct permanent physical structures on that land. The respondents are in tension of basic services to them. But KSR is

achieving the key dimensions of the slums and squatters. The living standard of people in KSR is better than SSS and TSS because they have legal tenure security. Most of the squatters living at SSS have a perceived high level of 'de facto land tenure' but only 'perceived land tenure' in TSS.

Most of the households depend on a variety of sources for water. Major sources are Private tap water, hand pump, well and communal. The numbers and percentage of households using different type of sources for water are shown in Figure: 3.

Sources of water vary in different squatters. SSS has better water supply because there are many respondents using private tap for water. TSS has not proper access of water. KSR squatter has only communal source of water. There is also communal rain water harvesting system from the assistance of Water Aid Nepal. The quality of water in KSR is better and fresh in comparison to other study areas.

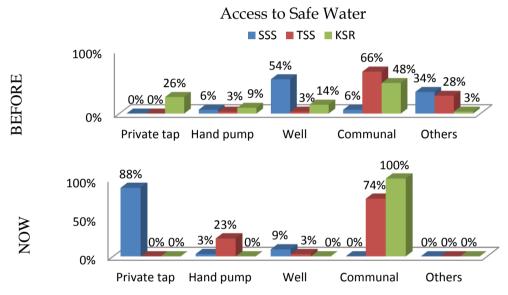
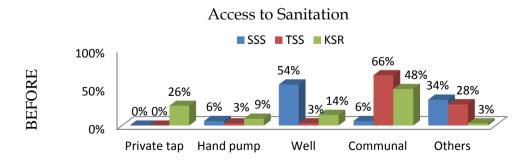


Figure 3: Source of Water among SSS, TSS and KSS (Source: Household Survey 2015)

The condition of access to sanitation and its use by the respondents is found better because they are more aware about their health at present. The Figure shows that the respondents in SSS and KSR are more conscious about their health.



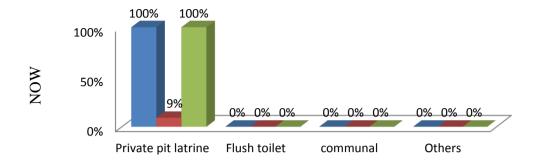


Figure 4: Source of Sanitation among SSS, TSS and KSS (Source: Household Survey 2015)

But in TSS, the respondents are reluctant towards their access to sanitation due to the fear of eviction because the government forcefully evicted them several times.

TSS has poor living area, poor economic condition, fear of eviction and insufficient living area. TSS was evicted by the government on May 8, 2012 so that they are not willing to construct any permanent structure there. The Figure shows that Living area of the squatters is found not satisfactory in TSS and SSS. SSS is more developed in comparison to TSS where many of the squatters have multiple rooms for living though there are varieties in the number of rooms each family possesses. In KSR, there are all facilities for living, sufficient living area and planned sizes of the rooms.

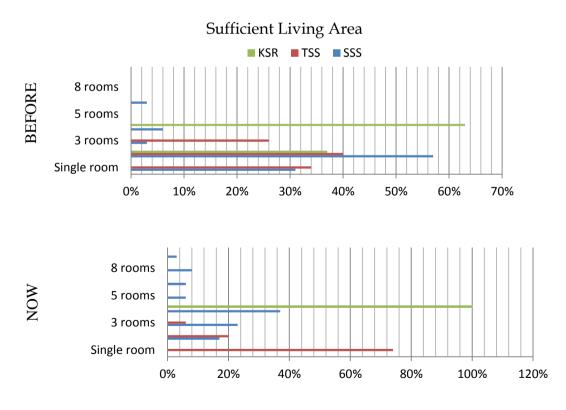


Figure 5: Sufficient Living Area among SSS, TSS and KSR (Source: Household Survey 2015)

Living area gives the picture of how the squatters are passing their lives. To compare all three squatters, TSS has poor condition of living area. It reflects that the squatters in this area have poor economic condition, fear of eviction and problem of sufficient living area. In comparison to it, SSS is more developed where many of the squatters have multiple rooms for living. But still, there are varieties in the number of rooms each family possesses. KSR is resettled as per the government's aid and decision. So, there are all facilities for living, sufficient living area and planned sizes of the rooms.

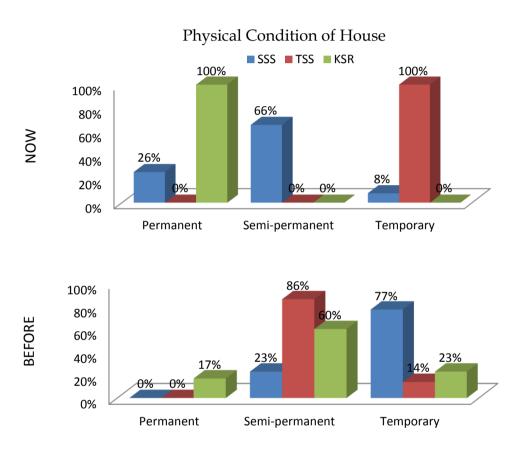


Figure 6: Physical Condition of House among SSS, TSS and KSR (Source: Household Survey 2015)

The Figure shows that practice by the government and fear of eviction are the main causes of the squatters planning of the physical structure of their houses. In TSS, the government tried to evict the area, so the squatters are not willing to construct permanent structure. Similarly in SSS, there is the support of several agencies and the government has also not tried to evict them. So, there are more semi-permanent structures. In comparison to these squatters, KSR is more developed in the matter of physical condition of the houses. After the resettlement, respondents in KSR are found happy and comfortable. They don't need to worry about the condition of their houses.

Being the resettlement by the government, income status of the respondents in KSR is better than in other two study areas over the past ten years. The squatters running self business and office works is increasing in all three study squatters. The study shows that they are earning more and engaged in many income generating activities. But still, the respondents having of daily wages are more than the manual workers or job holders.

6. CONCLUSIONS

There are both 'push' and 'pull' factors that contributed to migration in different squatters in Kathmandu Valley. In one hand, they had poor economic status, they were deprived of modern facilities in the rural areas, they could not educate their children in better schools and there were not modern health facilities in their rural villages. These factors worked as the push factor of migration of the squatters. On the other hand, the respondents are found coming to the study area in search of better jobs, services, education for the children and opportunities. These worked as the pull factor of migration. But, their migration could not satisfy them. It is so because of high living costs in the cities, unemployment and low wages jobs, high demands and expectations have given chance to the formation of slums and squatters in the city areas. The squatters in the study area are found with several problems. They are facing the problems of their access to financial markets, fear of eviction, lack of proper physical facilities and services; and several physical-psychological problems.

Land tenure security is found more important for the improvement of livelihood of squatters in comparison to other physical aspects. Similarly, the respondents' living standard is found improved in the past ten years. The squatters there want to live near the city, but are having several economic, health and social problems too. The case is different in SSS. They are living there for more than 40 years. So, they are not afraid of the eviction. But still, they do not have tenure right. So, they do not dare to construct permanent structure in the land they have occupied. Consequently, this study shows that tenure right plays vital role in the livelihood of the squatters.

In the past ten years, the squatter settlements are found improved along with their several problems. The improvement level in TSS is negative in regard to key dimensions of the slums and squatters. Relatively, SSS has improved record of the squatters' living standard, physical facilities, and sources of income, monthly income and access to the other factors of livelihood. Being the resettlement, KSR is achieving the key dimensions of the slums and squatters. The squatters have access to safe water, access to sanitation, secure tenure, and durability of housing and sufficient living area. Consequently, The KSR was evicted from Bishnumati river bank's squatter settlement as a result of Bishnumati Link Road project in Kathmandu which is the successful story of resettlement approach in Nepal.

In the squatter settlements selected as the study areas, legalization of the tenure security and thorough study of the settlers' activities and practices are needed. Participatory Resettlement approach is found better in comparison to other settlements in regard of basic facilities and tenure security. So, Participatory Resettlement is recommended as the promising way for improving settlements and their lives near the urban areas because tenure security is found the burning problem of squatters. Furthermore, STDM can be a better way for squatter settlement along with resettlement and providing an opportunity to live a dignified life of them.

Livelihoods of Squatter Settlements: Analysis from Tenure Perspective (8536) Ashokkumar Shrestha, Purna Nepali and Reshma Shrestha (Nepal)

FIG Working Week 2017 Surveying the world of tomorrow - From digitalisation to augmented reality Helsinki, Finland, May 29–June 2, 2017

REFERENCES

- CBSN. (2011). Priliminary Census Report 2011. Kathmandu: Central Beureau of Statistics.
- De Soto, H. (2000). The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else. London: Black Swan Books.
- DUDBC, (2014). Business Plan-2014. Government of Nepal Ministry of Urban, Kathmandu
- FAO. (2012). Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security. FAO, Rome.
- GLTN & UN-HABITAT, (2012). Handling Land: Tools for land governance and secure tenure, United Nations Human Settlements Program, UNON, Publishing section, Nairobi.
- Haack, B.N. and Rafter, A. (2006). *Urban Growth Analysis and Modeling in the Kathmandu Valley*. Kathmandu, Nepal: Habitat International.
- Hosaena Ghebru Hagos and Stein Holden (2013). *Link between Tenure Security and Food Security. Evidence from Ethiopia*, IFPRI Discussion Paper 01288
- Kotter, T. &. (2009). Developing urban Indicators for Managing Mega Cities, Land Governance in Support of The Millennium Development Goals: A New Agenda for Land Professionals. *International Federation of Surveyors (FIG)*. Washington DC.
- Limb, M. and Dwyer, C. (2001). *Qualitative Methodologies for Geographers: Issues and Debates*. London.
- Lumanti. (2001). A situation Analysis of urban poor communities in Kathmandu and Lalitpur, Lumanti, Kathmandu.
- Lumanti. (2007). City Care, Lumanti, Kathmandu
- Lumanti. (2008). Status of Squatter Communities along Bagmati River Squatter and its Tributaries in Kathmandu valley. Lumanti, Kathmandu.
- Nandi, S. and Gamkhar, S. (2013). *Urban challenges in : A Review of recent policy measures*. Habitat International.
- NPC and UNDP, (2014). *Nepal Human Development Report 2014: Beyond Geography, Unlocking Human Potential.* Kathmandu: National Planning Commission (NPC) [Government of Nepal] & United Nations Development Program [UNDP].
- Patel, S. (2013). Upgrade, Re-house or Resettle? An assessment of the Indian government's Basic Services for Urban Poor (BSUP) program. Environment & Urbanization, April 2013 vol.25(1).
- Shrestha B. K., (2013). Squatter Settlements in the Kathmandu Valley: Looking Through the Prism of Land Rights and Tenure Security. Published online: 9 February 2013
- Shrestha, R. (2014). Decades of Struggle for Space: About the Legitimacy of Informal Settlements in Urban Areas, (7095), FIG Congress, KualaLumpur, Malaysia 16 21 June 2014
- Shrestha, R., Tuladhar, A. M., Zevenbergen, J. A., & Banskota, M. (2016). *Urban Land Governance: "Action Space"*, *Legitimacy of and Intervention Strategies for Urban Informal Settlements in Nepal*. Nordic Journal of Surveying and Real Estate Research, 11(2), pp. 20-50.
- Tanaka, M. (2009). A decade in the work of the squatters' movement in Nepal. Environment and Urbanization, 21(1).
- UN-HABITAT. (2003). Improving the lives of 100 million slum dwellers: Progress towards the Millennium Development Goals. Nairobi: UN-HABITAT.
- UN-HABITAT. (2010). Nepal Urban Housing Sector Profile. Nairobi: UN-HABITAT.
- Van Gelder, J. L. (2010). What tenure security? The case for a tripartite view. Land Use Policy, 27, 449–456.

WHO. (2013). <i>Urban population growth</i> . World He Ying, S. et al. (2011). 3D Cadastre in China: a conversion of the Workshop on 3D Cadastre Delft.	
Livelihoods of Squatter Settlements: Analysis from Tenure Pe Ashokkumar Shrestha, Purna Nepali and Reshma Shrestha (N	

FIG Working Week 2017 Surveying the world of tomorrow - From digitalisation to augmented reality Helsinki, Finland, May 29–June 2, 2017

CONTACTS

Mr . Ashok Kumar Shrestha

Survey Officer, Survey Department (Ministry of Land Reform and Management) Minbhawan, Kathmandu, Nepal.

Master Degree in Land Administration, Department of Civil and Geomatics Engineering Kathmandu University, Nepal.

Mobile No. +977-9841305953 Email: shrestha.ak1@gmail.com

APPENDICES

i. Shankhamul Squatter Settlement





ii. Thapathali Squatter Settlement



iii. Kirtipur Squatter Resettlement





iv. Focused Group Discussion

