

# Urban farming for community well-being in Kathmandu



Shristi Shrestha

# COLOFON

## **Urban farming for community well-being in Kathmandu**

MSc Thesis Landscape Architecture and Planning  
Specialization Socio-spatial Analysis  
SAL 80436

Wageningen University and research Centre  
Department of Environmental Sciences  
Socio-spatial Analysis Chair Group

Author: Shristi Shrestha  
821216759090

Supervisor: Dr. Henk de Haan

Examiner: Dr. Henk de Haan, Karen Peters

August 2011

# **Urban farming for community well-being in Kathmandu**

Specialization Socio-spatial Analysis  
SAL-80436

Shristi Shrestha



Wageningen University and research Centre  
Department of Environmental Sciences  
Socio-spatial Analysis Chair Group

## Acknowledgement

The present study is a result of my interest in bringing changes in community through small initiations rather than taking big actions, and it was refined by Dr. Henk de Haan, Supervisor of my research work. I wish to place my sincere heartfelt gratitude to him for constant encouragement and inspiring guidance throughout my studies. His critical feedback since the initial phase is worth praising. Also, the letter he made to take to my home country helped me a lot to convince Government officer and farmers that their materials and interviews will not be misuse.

Throughout the process and research I had support from various people. I am indebted to all the people I interviewed. The information's from the interviews were valuable for my thesis report. I'm indebted to my ex-hostel warden and my lecturer Mrs. Mathura Karki for showing Saligram Bal Griha Urban farm to me. Her idea, although very vague, helped me formulate my interview questions during my Nepal visit. My gratitude is extended to Emilia Zemlak for teaching me 'Adobe InDesign' program for my final report. Without her help my report wouldn't be presentable at all. My sincere thanks are also extended to all my colleagues especially, Chadani Tangebetani, Daisy Bravo, Karta Shrestha, Katharina Langenbeck, Sandeep Tamrakar, Shishir Gautam, Shyam Kumar Basnet who did tedious job to read my lengthy report for grammar.

I would also like to take the opportunity to thanks NUFFIC for offering fellowship for my Master degree.

Finally, my deepest thanks go to all others friends and well-wisher who have been directly or indirectly involved in this report making. Their inspiration always motivated me.

I am deeply obliged to all the authors, whose literature has been cited.



## **Preface**

The thesis, “Urban farming for community well-being in Kathmandu” is executed as part of the MSc program-Landscape Architecture and planning with the specialization in Socio-spatial Analysis. This thesis that you are about to read is a product of my rigorous research on the topic, which solely depicts my dedication towards my country and my determination to improve the community there in.

Even though this Masters course that I chose is completely different from my previous study, I’m indeed happy to choose this course and my thesis topic is still successful enough to bind me and fascinate me to explore more into the subject matter. During the course of my research I became more aware of my strength and weaknesses. I have been able to utilize my strength and refine my weaknesses and I hope to do the same in my future researches as well.

## Summary

Kathmandu Valley, being the capital of Nepal, has been the centre of attraction for the immigrants from all over the country. This continuous influx of migration has resulted in various elements like the city's rapid expansion, mass migration, centralization, immigration, lack of government role to address country's recurring problem tend to fade away communal bond in Kathmandu. The urban people have lost community tie among themselves. This is the price they pay for their freedom and opportunities. However, traditionally Kathmandu was renowned for its strong community. As a result of combined effort of farming and sensible designed-local material usage, infused with religious and physical threats, the ancient city planners were able to maintain well-being in the community.

Therefore, my assumption was that by reintroducing urban farming, the lack of feeling of community in today's Kathmandu can be brought back. For that I did literature study to see how urban farming helps support community well-being in both developing and developed country. From the literature study I learned that the primary purpose to establish urban farm is to overcome problems related to food either to compensate food demand during war or to overcome crisis situation as in Havana. What I also learned is that an urban farm can be easily transformed from a productive landscape to a consumptive landscape like what people are doing in America and Europe.

Then I did intensive field study in Kathmandu. For the ease of research, I divided urban farming community in Kathmandu into homogeneous and heterogeneous urban farming communities. Two urban farms from each community were chosen for the study. The reasons to choose these locations were diverse. Some urban farms were strictly started to overcome food insecurity problems while some did farming to utilize their free time.

As diverse as the reason to farm, there was also diversity among the homogeneous and heterogeneous urban farmers' work on their farm. Heterogeneous urban farmers tended to be more open to other people, were inquisitive to know about their neighboring farmers while homogeneous farmers' were reserved, and did not show much affinity among other farmers even if the other farmers were from same ethnicity. Nevertheless, these farmers were more attached to their kin members; and were helping each other while farming as well. Those farmers showed strong communal bonding. Through farming homogeneous farmers were having stronger kinship among themselves while for heterogeneous farmers; farming was a means to enlarge their contacts. In either of the case they contributed to the well-being of the community.

Although all these farmers were showing a positive response towards farming, the farm

land has been sparse for them due to rapid urbanization. Moreover, many of the homogeneous male members were tending to leave their farming profession and both the heterogeneous and homogeneous urban farmers were discouraging children to take the farm over. The farmers were arguing that there is less profit in farming profession and there are less government initiatives to encourage them to continue farming.

Through this research, I intend to advocate urban farming in Kathmandu. I strongly believe that urban farming can be one of the possibilities to regain community well-being. Therefore, I would like to propose the Government and respective authority to take necessary steps to encourage urban farming in Kathmandu before it is too late.

(\* 1 euro~ NRs. 100)

# Table of contents

Acknowledgement.....	i
Preface .....	ii
Summary .....	iii
<b>chapter 1 Introduction.....</b>	<b>11</b>
1.1 Background.....	13
1.2 Problem Statement.....	14
1.3 Research Objective .....	16
1.4 Conclusion.....	16
 <b>chapter 2 The meaning and functions of urban farming.....</b>	 <b>19</b>
2.1 What is urban farming? .....	21
2.2 Benefits of urban farming.....	22
2.3 The relationship between urban farm and food security.....	25
2.4 Urban farming and community .....	28
2.5 The relationship between urban farming and community well-being.....	30
2.6 Opportunities offered by urban farming.....	35
2.7 The significance of food security in terms of finding link between urban farming and community well-being .....	39
2.8 Summarizing theoretical framework .....	42
2.9 Research questions.....	43
2.10 Research framework.....	44
2.11 Structure of the report.....	44
2.12 Conclusion.....	44
 <b>chapter 3 Overview of Kathmandu: study of Past and present Society.....</b>	 <b>49</b>
++	
3.1 Urban morphology of Kathmandu Valley.....	49
3.2 Everyday life in traditional communities of Kathmandu Valley .....	51
3.3 Present context of development in Kathmandu: The cause for the lack of feeling of community in present Kathmandu .....	45
3.4 Present context of development in Kathmandu .....	56
3.5 Conclusion .....	62

<b>chapter 4</b>	<b>Methodology</b>	65
4.1	Qualitative case study method	67
4.2	Observation and Interview	71
4.3	Conclusion	73
<b>chapter 5</b>	<b>Urban farming and community benefits</b>	75
5.1	Urban farm tours	76
5.2	Results from interviews and observations	94
5.2.1	Results from general overview of the study locations	94
5.2.2	Results from detailed overview of the study locations	108
5.3	Conclusion	112
<b>chapter 6</b>	<b>Community life through farming</b>	115
6.1	The primary reasons to do urban farming in Kathmandu	117
6.2	The community aspect of urban farming	118
6.3	The influence of urban farming on day-to-day life of urban farmers	121
6.4	Different purposes of farming in homogeneous and heterogeneous farming communities	122
6.5	Reasons for the declined urban farming practices in Kathmandu	124
6.6	Conclusions	129
<b>chapter 7</b>	<b>Conclusion and recommendations</b>	131
7.1	Conclusion and recommendations	





# chapter 1

## Introduction





## 1.1 Background

Kathmandu, the capital city of Nepal, traditionally demonstrates high level of social cohesion. In past, the primary profession of almost 90 percent of the people in Nepal was farming. Farming was not only seen as a means to produce food but it was also based on strong community ties. Additionally, the rituals and festivals were also oriented towards farming and were practiced at times when there were less farming activities, like intentionally celebrating some festivals after harvest to constantly bring the community together. Such activities were capable to increase the feeling of community in traditional communities. Here, the essential meaning of community refers to those things which people have in common-which bind them together-and give them a sense of belongings to one another (Day, 2006, p. 1). Also, the planning of traditional houses with internal courtyard and the deliberate design attempt to have common shared public spaces induce people to come together and interact. Result of combined effort of farming and ingenious design intervention of traditional towns practiced through rituals and festivals have strongly influenced the community well-being. The community well-being is defined here in its widest sense and includes social factors, such as secure social relations, sense of belonging to a locality, and a network of family and friends (Glendinning et al., 2003).

Nepal is known for its rich traditional vernacular style in terms of farming and architecture. Although traditionally rich in its vernacular style, Nepal was ruled by the Rana regime from 1846 to 1951 who maintained unequal power relations and vertical social structures giving more power and privileges to conventional local power groups (Upreti, 2004). They even did not let Nepal exposed to the outer world. This halts the country's development and force people to have subordinate position. They also did not give chance to expand people's skills beyond what they already knew. Following the sixties new political system gained ground and the country was then exposed to the outer world. However this government and the new government following afterward show extremely poor performance in terms of economic growth, poverty reduction, human rights, social security, and development (Upreti, 2004). In the meantime, Western societies were rapidly progressing. Moreover, the exposure to the Western societies and the knowledge of difference between the development in Nepalese society and the Western societies influence Nepalese people to blindly copy western lifestyle. While on the other hand, the ruling government lacks enough power and money to systemize such haphazard development. The local public was frustrated with the governing party. The Maoist mobilized these frustrations and launched insurgency in 1996 that pushed the country at the verge of collapse.

The situation of the Kathmandu worsened when people from all over the country flew to the capital in short period of time (1991-2001) during the insurgency period. Kathmandu now is ethnically mixed and shared by Brahmin, Chhetri, Newar, Gurung, Tibeto-Burman ethnic groups, and traditionally untouchable occupational caste groups (Upreti, 2004). At present, it accommodates at least 67 ethnic groups out of 103 ethnic groups in total (Subedi, 2010). The change in the outlook of traditional Kathmandu both in terms of architecture (physical); and social living, brings diversity in people's living environment. Diversity in the research context refers to difference in social background, culture, religion and location of multiethnic people. Like the British society as mentioned by Hudson et al. (2007), the community in Kathmandu is 'drifting towards residential segregation with people from different ethnic and religious communities becoming strangers to each other' (p. 16).

## 1.2 Problem Statement

City's growth, centralization, succession, the consequent breakdown of culture and people's opinion, the rise of social distances; and the organization of interest on the basis of work activity rather than community activities (Zorbaugh, 1929, in Day, 2006, p. 10) caused that the modern communities formed lack the feeling of community as in the past (Pahl, 1991 in Dempsey, 2009, p. 322). The communities that are newly formed in the capital have totally different lifestyle and new neighbors that are totally new from where they belong. The total change in the surrounding and the constant struggle to lead their daily life makes them stranger among their neighbors. Milgram (1977 in Yucesoy, 2006) termed them as 'Familiar stranger'. These familiar strangers even if they live together hardly know each other. Such new communities formed indeed do not have any community.

Another problem related to the lack of feeling of community in Kathmandu is due loss of farm land. Only 70 percent of the total country's population does farming (Bryld, 2003) now. The percentile already reduced to 20 percent now and it is rapidly increasing to non-farming activities. Also, the haphazard growth of the city engulfs most of the farm land that once served as reliable source of interaction between people. It causes that at one hand, even though affluent urban people have enough money there is scarcity of food. While the deprived people, homeless and immigrants also lack money to buy food. All these factors influence the lack of community in the valley.

There is a common saying among Nepalese that 'Nepal is a garland of four main caste (Jaat) and thirty-six sub-castes'. This shows how ethnically and culturally rich the country is; with each ethnic group having different castes, social backgrounds, cultures, and religions. However, also among the caste group there is hierarchy in caste division that leads

some castes to be favored more than the others do. Nevertheless, as a part of society, the different caste groups and multi ethnic people have their right to practice their everyday life that is dominated by their own rooted beliefs. Nash & Christie (2003 in Dempsey, 2009) also mentioned that, all group should feel free from negative feelings to experience spaces.

Therefore, the issue of social cohesion and integration that can partly lead to community well-being in the context of present Kathmandu is important, and attempts should be made to recapture them (Pahl, 1991 in Dempsey, 2009, p. 322), because if this issue is not addressed very soon then the diversity may lead to conflicts and segregation. Therefore, it is of utmost importance now, to find an easy ubiquitous solution that addresses the problems related to the lack of feeling of community in Kathmandu. I believe one way to regain lack of feeling of community in Kathmandu is to re-introduce urban farming that was practiced everywhere traditionally. For example, Hou et al. (2009) showed that urban farming can be a source of community interaction in multi-culture urban farm in Seattle. There are also examples from the Western societies where the urban farms serve functions like food security, as in the case of Havana (refer: chapter 2, Table 2.1 and 2.3) and public spaces.

Urban farming is the growing of plants and raising animals within or on the fringe of cities (Veenhuizen, 2006). Urban farming is known by different names in different parts of the world like, urban farming, urban agriculture, community garden, garden farm, allotment garden etcetera. Nevertheless all these names carry the same essence, that is, to let humans get close to nature. The lack of common language in the subject is due to its potential to cover diverse range from ecology to community development. However, for this thesis research I tend to use term 'urban farming'. Since the term 'farming' accentuates a holistic approach to understand the interconnections between food and its role in well-being.

Urban farming in this thesis is regarded as public space. This is because urban farms offer opportunities for interaction among urban farmers by providing a platform for them to meet while also supplying environmental, social, economic, and health benefits (Hou et al., 2003, p.3). The urban farms function as a public space, since intrinsically like public spaces, urban farms work as interactional and experiential spaces (Yücesoy, 2006). Urban farm as public space is also a place to encounter different people who identify themselves with different groups and have different opinions of different forms of life (Young, 1995 in Cattell et al., 2007, p. 545). While working together in places like urban farm the differences are encountered and negotiated (Young, 1995). Urban farming influences every social activity although not as much as a public space can do but it at least tends to fulfill the social need of urban farmers working there.



### 1.3 Research objective

During my research, some questions have been aroused; like, how was the Nepalese community life practiced? Currently, are there more social interactions between farmers than other urban people that lack availability to open spaces? Do urban farm have special meaning to urban farmers? Are farmers aware of the opportunities offered by their urban farm? Are there other factors that fulfill the lack of feelings of community in the context of Kathmandu? Therefore, through this research I want to examine **to what extend urban farming provide opportunity for the people of Kathmandu to regain the feeling of community.**

### 1.4 Conclusion

My objective is to look at the intricate relation between urban farming and the community life. For that, in the following chapter I want to establish theoretical framework to know about the meaning of community and the role urban farming can play to help overcome the lack of feeling of community. My intention is to find a clear linkage between urban farm, community and well-being.







# chapter 2

## The meaning and functions of urban farming



Harvested apple carried during World War II  
Source: Hopkins 2008



This chapter is the theoretical exploration of the meaning of urban farming. I intend to look at various functions of urban farming. But, the study will only look at these matters partially. Indeed this section explores more in the relationship between urban farming and its impact on community. To be precise it examine the relationship between urban farming and its role in fostering interaction which can in longer run helps to support community well-being. For this, I look at the meaning of urban farming, and its benefits. Later, I look at the meaning of community; examine how the meaning of community is fluid and changing over time. I then look at the roles of urban farming. First, I take the usual role of urban farming-as a medium to combat food insecurity problem. Later, I introduce urban farm as a form of community public space. Most part of the research is then focus on finding the relationship between urban farming and community well-being. After the theoretical exploration I have my define research questions.

## **2.1 What is urban farming?**

*“Urban farming include the concepts of process and change, economy and means that derives the most benefit from the least effort and energy, diversity as the basis for environmental and social health, correctedness that recognizes the interdependence of environmental literacy that begins at home and forms the basis for a wider understanding of ecological issues world-wide, and a goal that stresses an enhancement of environmental values that are connected to change an integration of human with natural processes at a fundamental level.”*

Hough, 2002, p. 50

Recently it is noticed that there is a significant hiatus between the producer and the consumer, and between people and nature that directly concerns issue in urban welfare (Kneafsey et al., 2008, Hough, 2002). In such cases, urban farming can be an impetus to overcome such gap. Since, by definition, urban farming is the growing of plants and raising animals within or on the fringe of cities (Veenhuizen, 2006); it helps to bring people close to nature teaching people food growing process. In the meantime, it also facilitates diverse group of people that seek farming not only as a source to food availability but also as a means to improve prevailing social disorder like the unemployment, drugs abuse etcetera. Urban farming has the capability to address variety of issues ranging from food

security, environment enhancement to community development issues. Because of these numerous benefits, there are many people engaged in urban farming now. According to UNDP, in 1996 some 800 million people were engaged in urban farming worldwide, it now occupies large minorities in many cities around the world (Howe and Wheeler, 1999).

## **2.2 Benefits of urban farming**

There are many benefits of urban farming. The urban farming can have immediate benefits as health and economic benefits as well as prolong benefits like, environmental and educational benefits. Below I present various benefits that can be generalized as individual or collective benefits. Individual benefits include skills acquisition, and income generation through food production, whereas, collective benefits include increased local involvement, community development, and environmental education (Hall, 1996).

### **2.2.1 Socio-cultural benefits of urban farming**

Urban farming provides individuals with many important personal benefits, including psychological restoration, connection to nature, cultural expression, self-esteem, and personal growth (Hou et al., 2009). It helps to regenerate surrounding neighborhood by bringing vitality and conviviality to the surrounding via social exchange and interaction. People come together in a public space to grow food, that foster interaction with the people they either know or are still stranger (Franck, 2005).

Urban farming is cherished most for its social activities. Many urban farmers, neighbors and visitors go to urban farm to grow food and to know other people. It results that the residents are more concerned with helping and supporting one another, and have stronger feelings of belonging. It encourages social participation and sustainable communities; forming social inclusion and cohesion by being accessible to people from many different backgrounds (Ohmer et al., 2009). Thus, it can be said that urban farms are flexible and can adapt to the demands of the local community by creating and managing green space for people. Since, urban farming offers a place for people to meet, also for those who are from distressed neighborhoods, discriminated, women, ethnic minorities and elderly or those left out in the society, they help to build a sense of community (Ohmer et al., 2009, Hall, 1996).

Urban farming has also provided a valuable means of expression of local or ethnic identity. Food growing projects act as a focus for the community to come together (Viljoen et al.,



2005); people can go for picnics, and eat together, they can form a group and do job they like (Franck, 2005). By growing culturally significant products, urban farming makes difference in people's quality of life. On the other hand, urban farming also acts as an agent for urban regeneration- reducing discrimination, tackling crime. It helps in rehabilitation by engaging the victim to farming activities diverting their minds from drug use, selling drugs and by preventing other criminal activities (Ohmer et al., 2009). Since there are many activities going on nearby farming area the urban farm provides the neighborhood with a sense of community and security by acting as a means of providing surveillance (Hall, 1996).

In short, the socio-cultural importance of urban farming is essential to revitalize and strengthen neighborhoods, including the reclamation of devastated urban areas and to foster neighborhood's social ties and interaction, neighborhood's pride, community involvement, political activism, and feeling of safety and adjustment (Ohmer et al., 2009).

### **2.2.2. Environmental benefits of urban farming**

Plants help in stimulating environmental awareness through human interactions with nature. But, environmental awareness is possible only when the process is visible (Hough, 2002). Since, urban farming provides prolonged experience to its user by connecting urban people to the soil, plant and animal, it helps to create more pleasant physical environment, that is visible (Hall, 1996). Urban farming teaches urban dwellers to love nature (Lawson, 2005); integrate knowledge, skills, and commitment towards environmental protection and balance development with conservation (Hall, 1996). Such environmental education provides the best chance of spiritual growth and creative learning (Hough, 2002). Urban farming promotes good working habits; teach social responsibility by getting people to participate.

Urban farming also acts as natural filter. The organic products from the farm restore soil fertility (Franck, 2005) by utilizing composted waste (Hall, 1996) and increase the soil capacity and makes it fertile for production (Hough, 2002). By doing so, these projects can help governments save money by recycling organic wastes that would otherwise occupy space in landfill sites. Such composting programs help to increase public awareness of environmental issues-when seen in this aspect urban farming can serve an educational function by serving the broader community. Although urban farming is a small voluntary initiation but it has huge impact on environmental quality (Lawson, 2005).

### **2.2.3 Health benefits of urban farming**

While socio-cultural benefits and environmental benefits certainly improve the well-being of those involved in urban farming, the therapeutic value of farming also helps to improve the health of the people by providing space for work, exercise and relaxation (Hough, 2002). Many theorists explain the therapeutic benefits of plants for human beings. They express that people appreciate plants because it reveals enduring patterns of life, which respond to care by growing. Plants also have restorative functions to recover from stressful urban lifestyles and social isolation (Hou et al., 2009). Exposure to green plants can help reduce stress and other psychological problem especially in urban areas, where excessive noise and movement can cause stress (Hall, 1996). Healthy life style can be obtained if there is an interaction between an individual and the social-physical environment (Giles-Corti and Donovan, 2002, p. 1793). The observation of outdoor farming activities and experiences help to re-establish the connection with nature. Urban farming introduces a sense of dynamic seasonal change and emphasizes role of human being in sustainable environment (Ohmer. et. al., 2009).

In urban areas it is mostly reported that there is a deficiency of nutrition in diet. Over-processed, over-preserved and over-packaged foods, low in fruit and vegetables, and high in refined starches, fats and sugars, have low nutritional value. It follows that people have many diet related diseases such as heart disease, diabetes and appendicitis and among that obesity and heart diseases are the prime. In such cases, urban farming in cities help to improve people's diets by providing them with access to fresh seasonal fruits and vegetables (Ohmer et al., 2009). Adherence to organic method, the food grown in an urban farm is usually guaranteed to be free from herbicides and pesticides. Such is likely to raise awareness about food production techniques and provide knowledge. In addition to diet, farming can provide a useful outlet for increasing the amount of regular exercise; as well as provide space for work and relaxation.

### **2.2.4 Economic benefits of urban farming**

The primary function of urban farming is to grow food in order to support income and provide quality food (Crouch, 2003). However, the economic benefits of urban farming cannot be neglected. Since the urban farming is voluntary effort they are highly cost effective; local greenhouses, nurseries, and garden supply outlets provide economic benefits (Hall, 1996). The skills like commercial horticulture and qualifications gained from urban farming can be used in seeking employment in private sectors (Ohmer et al., 2009). Urban farming also stimulates local economy by selling food in poor urban neighborhoods where people cannot afford to go to high-priced shop (Franck, 2005).

### **2.2.5 Education benefits of urban farming**

Urban farming provides educational opportunity to educate youth and other community members about the value of farming, food and culture (Ohmer et al., 2009). Ohmer et al. (2009) says, 'Individual development is possible if people are given opportunities to take management role and develop team thinking.' It helps them acquire a sense of self, identity, and ownership. Urban farming enhance education and the quality of life of urban people by providing change of environment and sensual experience (Viljoen et al., 2005).

Urban farming is also a training ground for people in high density area, where jobs can be scarce and skills hard to acquire (Hall, 1996). It not only helps people to learn practical skills associated with farming but also teach them to care for open spaces. For some people this education can also be a source of income by having job like; trainer or educator. People working in such farming activities can benefit from team work and learn the importance of commitment and patience (Lawson, 2005).

From the above subsections it is clear that urban farming provides multiple socio-cultural, environmental, economic, and health benefits. Urban farming teaches people to contribute to their communities; learn skills and spend their free time productively and safely (Lawson, 2005). It examines the various components of natural and human environment by operating in balance with nature. It creates vibrancy in the surrounding through the process of growing and exchange of food that take a social form through education and sharing ideas (Worpole and Knox, 2007).

There are various aspects of urban farming discussed above; however, this thesis report is only looking at the food security and community well-being aspect of urban farming.

## **2.3 The relationship between urban farming and food security**

*WHO, Europe (2000) defines Food security as 'a situation where giving populations has both economic and physical access to a supply of food, sufficient in both quality and quantity, at all times, regardless of climate and harvest, social level and income'*

Viljoen et al. 2005, p. 21

In all cases of practiced urban farm, the primary purpose of farming is to compensate food security (Lawson, 2005). Urban farm has great potentials to enhance the situation of urban people especially those with lower incomes that are dependent on access to locally grown food (Bryld, 2003); either by providing access to fresh product; or fighting against raising food price; and improving nutrition. Urban farm has the potential to affect many people by directly providing food to urban farmers and increase opportunities for many urban people to have better food purchasing power. Practicing urban farming in the developing nations as mentioned by Appeaning Addo (2010) is significant since a significant number of population lives in or around cities where their livelihoods are dependent on natural resources such as land for food, water, fuel and space for living. And, in case of crisis, like for example, facing climate change; economic crisis; and armed conflicts, comparatively, cities are more vulnerable than rural areas. Significantly, these problems affect urban poor more, especially in food market (Egal 2010 in Larjosto, 2010). Urban poor are economically deprived people whose access to cheap healthy food is marginal.

Research conducted by the World Bank mentioned that the majority of adults and children living in poorer urban neighborhood suffer from diseases that limit their learning and working capacity (UNDP, 1996 in Bryld, 2003). In such case, urban farm provides an economic lifeline to many since it also purposes to 'decrease malnutrition and increase the quality of food intake' (Bryld, 2003).

Farmers can derive significant income by providing access to fresh product from the sales of fruits, vegetables and meat through shops, restaurants, and direct sell (Howe and Wheeler, 1999). Thus, urban farm has a vital role to play since it actively provides food into economically deprived area (Maye et al., 2007); increase economic empowerment in a poor minority community. At the same time, it acts as a good way to start localizing means of production and use, and also answer huge need for healthy, affordable food (Franck, 2005).

Poverty and deprivation challenge building social cohesion. The deprived families marked by-unemployment, acute family vulnerability, incapacitating poor health, low levels of educational achievement has limited capacities of communities for social participation and collective engagements (Hickman et al., 2008, p. 116). Therefore, these deprived groups generate a culture of isolation and a sense of separateness from the relatively more prosperous part of the city (Hickman et al., 2008, p.121). In such instance, urban farm promotes reduction in poverty and deprivation by prompting the development of community food security (Howe and Wheeler, 1999). The urban poor who lack formal jobs can do farming as a means to add up to household income practices. Many urban farmers, espe-

cially women, can use income earned from farming on food provision for the family as well (Appeaning Addo, 2010).

The ability of urban farms to improve food related problems, ecosystem and health, livability, social neighborhoods and open-space network, and equality has implications for urban sustainability in all of its social, economic and environmental dimensions (Hou et al., 2009, p. 5). By linking against poverty by practicing sustainable farming, urban farm serves as resources for low-income communities, immigrants, economically marginalized and deprived families. Urban farm in that sense helps to reduce deprivation and regenerate social well-being (Hickman et al., p. 117).

The importance of relationship between urban farming and food security can be better explained by looking at the case in Havana, Cuba.

**Table 2.1 Havana: an example to overcome food insecurity through urban farming**

Urban farm in Havana promoted an idea, “Production in the community, by the community, for the community” (Novo and Catherine, 1999). The slogan refers to a close cycle of producers, products, marketing and consumers because it was seen as a way to bring producers and consumers close in order to get a steady support of fresh healthy and varied products directly from the production place to the consumers. Furthermore, repercussion of the country’s situation was only successful because of the secure farmers’ access to land. This was done by turning over the unused land into productive land to all those who wanted to grow their own food (Novo and Catherine, 1999).

The development of urban farming has created new employment opportunities for many of those who were the victim of the crisis that led to reduced jobs significantly. In 1998, urban agriculture accounted for 6-7% of the new jobs. It was found that, the household income of many people working in urban farm was higher than the national average salary (Novo and Catherine, 1999).

Beside job opportunities and increased economic stability urban farm also taught citizens to be philanthropic. The communities-basically an official job holder that farm in spare time and a large number of retired men and women-provided the land free of charge to the urban farmers. Since, the urban farmers did not have to pay for the land it was still prof-

itable for them to donate food to schools and daycare centers. It consequence in better nutrition for children that promoted better eating habits (Novo and Catherine, 1999). Because of rare and variety of food grown in urban farm the farmers could also exchange food that enhance cohesion and solidarity in the neighborhood.

*Lesson learned*

The level of integration of urban farming into urban planning policy is a must. It should be achieved through more flexible and proactive approach taking the middle way by incorporating government and public role into play. The strong support from the government and the strong education background is the primary key to its success.

## 2.4 Urban farming and community

As already mentioned in the introduction chapter, urban farming in this report is regarded as public space. Public spaces is a place that creates mutual understanding between people because of its ability to bring different people together (Hester, 2006) either with personal interests, purposes and schedules. Public spaces act as a shared resource in which experiences and values are created (Mean and Tims, 2005). These public spaces influence everyday social activities because it affects people to share norms and values in such places (Amin et al., 2000, Mulgan et al., 2006 in Dempsey, 2009). It is where people can display their culture and identities; and learn awareness of diversity and difference (Worpole and Knox, 2007). Public spaces including streets, markets, community centers, parks, urban farms, playgrounds, and neighborhood spaces play vital role in the social life of communities. The concept of community is fluid. As Day (2006) mentioned it stretched from the pleasure of local bonds to the warming of moral values of social cohesion. For him, community refers to those things, which people have in common while overlooking their differences, which bind them together and give them a sense of belongings to one another. The idea of community captures the elements of inclusion and exclusion, pointing towards those who belong together, and those who are held apart (p. 2). Day (2006) projected further that the concept of community can be used as a bridge to rethink the relations between self and society, identity and culture, security and freedom, opportunity and risk (p. 8). For him communities are objects of regeneration, participation and intervention.

In contemporary society the concept of public space and community sounds very promising. Since public space brings diverse group together, it allows them to share space to in-

interact positively and negotiate differences (Andini, 2010, Dines et al., 2006, Hudson et al., 2007). At places where people engage in social interactions as Day (2006, p.4) mentioned has the potential for community formation. By constantly meeting the differences, and having constant interaction, the community formed are strong that have a sense of belonging to one another. Such sense of belongings is the possible catalysts for social cohesion. Here, social cohesion refers to two principle concepts that emphasize the reduction of disparities, inequalities and social exclusion; and at the same time the strengthening of social relations, interactions and ties (Berger-Schmitt, 2000 in Hudson et al., 2007, p.2). Social cohesion leads to social integration that ultimately enhances well-being.

Dictionary (cf. answers.com) defines well-being as, “a good or satisfactory condition of existence; a state characterized by health, happiness, and prosperity; welfare: to influence the well-being of the nation and its people.” WHO (1948 in Cattell et al., 2008, p. 545) described well-being as, ‘positive health’, or ‘a state of physical mental and social well-being’. Well-being involves sense of belonging to a locality, feeling good, not only about ourselves, but also about our social network and relationships, within families, between peers, and in communities (Glendinning et al., 2003; Keyes, 2002 in Cattell et al., 2008). Although well-being incorporates very broad definition, only the definition concerning social well-being is used in this report. Thus, social well-being in this thesis is defined as a ‘social model that locates individual experiences within social contexts (Bowling, 1991; Blaxter, 2004 in Dines, 2006 et al., 2006, p. 26). It involves feeling good about individuals and its social relation within families, peers and communities’. The term ‘social’ itself means living or disposed to live in companionship with others or in a community, rather than in isolation. So, to know about the ‘social model’ and ‘social contexts’ it becomes vital to study places that provide settings for contacts and interactions among people. Among them urban farm as a form of public spaces satisfies following requirements since it is ‘able to bring people together where friendships and support networks are made and maintained as key to a general sense of well-being’ (Dines et al., 2006).

However, it should be noted that social well-being is a part of community well-being and it does not necessarily mean that when the social well-being is obtained community well-being is obtained as well. Community well-being incorporated very wide definition ranging from individual health to welfare of the country. Nevertheless, increase in social well-being can definitely increase community well-being but it should always be remembered that community well-being is much more than social well-being.



## 2.5 The relationship between urban farming and community well-being

*“Food is a ‘mechanism of change’ in multiple way for all community as well as individual”*

Franck, 2005, p.11

Urban farming provides opportunities to enhance community well-being by providing featured facilities like public spaces do by offering platform for people with different cultural background to meet and interact (Lofland, 1998; Fainstein, 2005 in Peters and Haan, 2010). Through urban farming many diverse societies can generate ‘appreciative perceptions’ among each other (Franck, 2005). By constantly working together and seeing each other often the shallow interaction can be converted into a prolong friendship (Gehl, 1987). It provides a valuable means of expression of local or ethnic identity, through growing culturally significant produce to make difference in people’s quality of life (Hou et al., 2009). People can go picnicking and eat together, they can form a group and do job they like (Franck, 2005). Thus, urban farm acts as a medium for the urban farming communities to come together (Viljoen et al., 2005) for mutual interest. As such, urban farms can be seen as a democratic space and farming as an activity that brings diverse groups together (Lawson, 2005 , p. 30). Urban farm also helps to regenerate surrounding neighborhood (Franck, 2005). It is a place for all, also for those who are from distressed neighborhoods, discriminated, women, ethnic minorities and elderly or those left out in the society (Hall, 1996; Ohmer et. al., 2009). It is also a place for those who lack contact with open, informal, community run public space (Hough, 2002).

Since, urban farming offers a place for wide range of diverse people it helps to initiate interaction at the modest level and social integration at the later stage, which is further enhanced to social well-being via constant meeting, tolerating the diversity and respecting each other differences. And while working in a team urban farmers develop survival skill to adapt in urban life (Hough, 2002).

This relationship can be better explained through the following subsections. The aim of these subsections is to elaborate on issues that are practiced every day in an urban farm that contributes to obtain desirable well-being. Examples are provided in between at relevant places to explain further the case and to support the arguments.



### **2.5.1 Everyday life in an urban farm**

*“To see nature completely and to understand the inter-relationships and connections between human and non-human life one should begin their search in the places where most people live”*

Hough, 2002

Saito (2007) believes that landscape provides opportunity to enrich dimension of aesthetic inquiry that provides potential for improving the quality of life. However, landscapes in our everyday surrounding are often overlooked despite the fact that these landscapes are the one that should be constantly cared for. How we engage with the ordinary landscapes of home, work, travel, and recreation is an important measure of the quality of our lives (Berleant, 1997). These everyday landscape are the landscape that contributes much to well-being because people spend much of their time in these landscapes (Van den Berg, 2011) rather than the dramatic and extraordinary landscapes which people usually aspire. The messiness of the streets and the filthy characters of buildings have a totally different meaning in the residential environment since these area is an extension of the dwelling, and all pleasant and unpleasant experiences have a direct impact on one's feeling of well-being and sense of place (de Haan, 2008, p. 81).

On the other hand, the people's attitude and societal policies regarding protection of landscape are significantly affected, sometimes determined by aesthetic considerations. The landscape which are generally considered aesthetically unattractive, are usually vulnerable to abuse and destruction, because people don't care much about what happens to them (Saito, 2007). Aesthetic quality helps to provide as many positive experiences as possible, so that people appreciate their surroundings and will take care of the landscape and behave in a more sustainable way (Hough, 2002). In context, urban farm has pivotal role in everyday life and its meaningfulness for the user. It aesthetically enlivens the surrounding by its planting, arrangement and landscape (Taylor, 2008). Aesthetic in urban farm also contributes to arouse visual stimulation (Franck, 2005, p. 113). By offering town dwellers the opportunity to recreate in their immediate vicinity, by seeing blossoms, by experiencing the changes of seasons and by learning about the origin of food (Kaptein and Frederix, 2010, p. 4) residents feel more responsible for their own environment that contributes to improve community well-being.

**Table 2.2 Salop Drive Market Garden, Sandwell**

This article is from Maye, Holloway and Kneafsey (2007 in Shrestha, 2010). It talks about Salop Drive Market Garden, Sandwell. Sandwell is an economically depressed urban area in the West Midlands. The place was initially characterized by ill health, premature death and deprivation. The former allotment garden had also fallen derelict over a period of about 15 years. Recently the community has reclaimed the garden. At the start, they needed extra effort to reclaim the overgrown site and improve the soil. The project at present offers leisure, social and learning activities, which include basic and intermediate skills training, community events and celebrations. It provides people to learn about food production, undertake healthy exercise and also learn about healthy eating and lifestyles. The success of this garden is the voluntary service it provides. Local residents and users of the garden are regularly consulted; they encourage participation in community interaction. For that questionnaire, workshops and social events such as community lunches and visits to other gardens are practiced. Through consultation it is known that people participate in such garden to get fresh and quality product. Gardeners also try new vegetables and learn new cooking skills because of being part of the garden. The other benefits includes the enjoyment of getting out of the house, meeting new people, getting some physical exercise, relaxation, stress-reduction and gaining a sense of pride and satisfaction from seeing the results of their work.

The positive factor about this garden is that the plant growing decision is made in response to the needs rather than in response to commercial pressures. This garden recognizes that gardening is much more than simply production of food; it has community and environmental dimensions, which were greatly appreciated by the gardeners. This garden in the later phase has a broader agenda of widening participation, promoting wildlife conservation, environmental sustainability and improving public health not only by increasing access to fresh fruits and vegetables but also by enabling people to enjoy the physical and mental health benefits associated with growing their own food.

### 2.5.2 Place-use meaning

*"Memories of favorite places can have an important influence on well-being*

Dines et al., 2006, p.27

When people familiarize themselves with space, spatial objects become invested with memories of people and events. Such memories are triggered by visual and other sensual perceptions when people move in space (Haan, 2009). Blummer (1969) suggests people assign meaning to objects and phenomena through an understanding that is a result of social interaction. According to Blummer (1969), object do not define themselves, but are defined by society that has constructed meaning for that specific object or phenomena. Therefore, people attach particular meanings to particular places, thus constructing place identities (Jacobs, 2006). Some places play an important role in personal and social life. Among those places urban farm is also one.

Urban farmers in a long run develop place meanings with their farms that is found with the relations between place, self and society (Jacobs, 2006). For farmers, farming holds several meaning to them; for them it is a symbol of collective resistance, production of social capital, and support of democratic value (Glover 2003, Glover 2004, Glover, Shinew, and parry 2005 in Hou et al., 2009). Urban farm serves as sanctuaries and as a means of expression for many people (Hou et al., 2009). It helps people to value live culture and experience ordinary everyday life by emphasizing on sense-making in lived culture that is committed to value local knowledge and are concerned to display these meanings (Taylor, 2008). In daily life, however, people often do not make such division, since uses, meanings and experiences of a place are intimately intertwined. This is also the case in urban farming. The farmers can have different characteristics of their farm to make their individual sense of the place (Jacobs, 2006).

#### **Table 2.3 Allotment Garden in Zestienhoven, Rotterdam**

This article is taken from Jacobs (2006 in Shrestha, 2010). He studied the allotment garden in the city Centre, Rotterdam. There was a dual conflict between the local gardeners and city council for place meanings. The city council wanted to build new residential area and companies in the allotment garden area whereas the gardeners have developed strong bond-

ing with the place and they did not want to lose their allotment garden. This place was full of meaning, experience and use value for the people. Memories do not always represent documentaries of events, but instead it constitutes interpretations used in narrative constructions, tightly connected to emotion. Memories of everyday experience are therefore frequently distorted (Miształ, 2003 in Stephan et al., 2010). Thus, Jacobs interviewed twenty gardeners. The interviews mainly focused on the special characteristics of the gardens that make the sense of the place. The result of the interview was the use-meaning-experiences of the garden. From the interview it was revealed that for some it was a place for rest, privacy while for other it was nature, birds, plants. Some visited the garden for social contacts and helped each other. Some liked the place because it was safe. Some gardeners talked about the health, recovery, fresh air, and stress reduction. For some it was an escape from busy chaotic life. Some were there to get busy, some to fulfill their hobby. Some had fond memories and history of the place. It can be seen that whatever be the case for gardeners to visit the place the gardeners had developed a bond with the place, a strong sense of community. The place had distinctive and special identity for them. The people developed a positive experience for the place. They treated the garden as an intimate part of personal history. This motivated them to take care of their gardens, which forced them to protest when the city council decided to remove the allotment garden.

### 2.5.3 Experiential qualities of urban farming

To understand landscape is to experience a situation. It can be done everywhere in the landscape, even while walking as a passerby or growing fruit and vegetables. Significantly, the experience of landscape can be relatively high when people involves in it and be a participant, rather than being a viewer because landscape is immensely embedded in its context, that is, the environment. Therefore when people are involved in landscape that is by doing farming there is no separation between farming and people. Only then the landscape is living and thus it is beautiful (Koh, 2009).

Social scientist and policy maker generally consider human experiences or their sense of place to reshape the city. To recognize the existence and the hidden potential of natural, social and cultural environments that enriches urban places (Hough, 2002) it is necessary for them to know about human experience. However, the knowledge of experiential quality lies at the heart of environmental education thus it is very important for the spiritual growth and creative learning (Hough, 2002). Only by doing that, they can provide successful design intervention and are able to fulfill the demand of the public. Therefore, (Thwaites, 2001, p. 245) argues that, there is a growing need to understand what experience matters to people and how it can be interpreted in design.

In the context of urban farming, farmers can have amplitude of experiential qualities from their farm since by constantly working in a farm many farmers build bonding with their farms that helps them to build an experience (Jacobs, 2006). It can be demonstrated by looking at the garden magazines where many farmers talk about the experiential qualities of their farm (Hou et al., 2009).

### **Sensory quality of an urban farming**

Urban farming lowers down the visual and sound disturbance; and improves natural smell and taste. These sensory experiences enrich our everyday sensation of sound, sight and smell (Franck, 2005). People can be actively involved in farming by working, planting, teaching, and doing jobs or watch as passerby through the farm area, see flowers, vegetables and fruits growing day by day, see birds activity, smell the fruits and touch them and hear birds sing (Franck, 2005). Even just walking by, these sensory experiences are possible and plentiful because there are varieties of things to explore in the farm. This entices people to touch, smell and even motivates them to get involved in farming. With both type of active and passive involvement there is an overall experience. Urban farming in the overall context of sight, sound, taste, touch and smell gives the positive experience to the surroundings by providing liveliness, conviviality and sensory experience (Franck, 2005).

## **2.6 Opportunities offered by urban farming**

Many writers mentioned that attractive neighborhoods can enhance well-being as it contributes to the quality of life, livability, community sustainability, feeling of security and local pride (Burton and Mitchell, 2006 in Dempsey, 2008, p. 336). An urban farm can provide attractive environment through the exchange of vegetables, farming skills, ideas and goods among farmers. Furthermore, urban farming can provide opportunities for urban farmers to enhance their social boundary. Since, urban farming emphasizes on physical

and social actions it determines the possibility to start more meaningful contacts—more than just a passive nod and hello.

As urban farming provides all kinds of personal, cultural and economic exchange through the exchange of goods and services, and social transaction, Worpole and Knox (2007) mentioned that, urban farm provides opportunities for social interaction, social mixing and social inclusion, and can facilitate the development of community ties (p. 5). These factors contribute to the determinants of socially vibrant spaces (p. 7). Therefore, it can be said that the social value of an urban farming is wide, and lies in the contribution it makes to ‘people’s attachment to their locality and opportunities for mixing with others, and in people’s memory of places’ (Dines et al., 2006).

Some sociologists claim that high-density, mixed-use neighborhoods increase opportunities for social interaction, increase feeling of safety and a sense of community (Calthorpe, 1993 in Dempsey, 2009). But there are equal chances that high residential density can lead to a decrease in social interaction and an increase in social disintegration due to crowding, as well as reduction in the sense of community, social networks and feelings of safety (Churchman, 1999; Williams, 2000 in Dempsey, 2009, p. 332). However, the ‘ordinary places’ within the built environment and green spaces such as urban farm can be considered not only to have restorative properties but their impact on well-being is also remarkably high (Gesler, 1992, 2003; Williams, 1999 in Cattell et al., 2008, p. 546). Thus, the urban farm is important for sustainable communities but for its effectiveness, care should be maintained to address factors that contribute to the perceptions of quality and relate to the day-to-day lives of urban farmers (Dempsey, 2008). These factors are:

### **2.6.1 Social interaction**

The simple meaning of ‘social interaction’ is a process in which people act toward or respond to others (Runciman, 1991). Weber elaborates, “interaction between multiple individuals is considered social if the acting individual takes account of the behavior of others and is thereby oriented in its course” (Weber, 1978). Another theorist Giddens (1979) emphasized that social interaction is of importance throughout all the life stages. Therefore process through which interaction occurs should be constant natured. In that sense, role of urban farm is prominent since it facilitates social interaction and brings vitality and conviviality (Franck, 2005) to urban life that is valued through friendship in a shared space, and self-regulated activity (Crouch, 2003). It provides settings for social interactions by being accessible to all types of groups with different cultural background regardless of their age, gender, and social status (Lawson, 2005). Social interaction in a positive

way helps in social cohesion, which enhance further to social integration and community well-being as the final outcome.

In multicultural society, social capital is valuable asset and can be derived from two kinds. 'Social capital can be derived from bonding, supportive, ties between kin or members of an ethnic group, while bridging capital (weak ties) connects individuals to dissimilar groups and additional resources' (Grano Vetter, 1973; Putnam, 2000 in Cattell et al., 2008, p. 546). Also in multicultural society there are clear tensions between the need for community, and the uncertainty associated with integration (Cattell, 2004 in Cattell et al., 2008). However, bridging capital can play crucial role to promote cohesion within multicultural society (Alcock, 2003 in Cattell et al., 2008). In such case urban farm can play a vital role since as a form of public space urban farm can provide opportunities for urban farmers to meet on daily basis, enable each other to interact and to experience other people functioning in various situations (Gehl, 1987).

### **2.6.2 Familiarity**

According to Tilly (1998 in Yücesoy, 2006) there are various social interaction patterns; some interactions are very shallow while some interactions are intense. He argues that these interactions pattern are guided by scripts and shared local knowledge, which in long run influences familiarity, experience and acquaintance. In that sense, these factors are important because as Yücesoy (2006) mentioned these are the base to develop everyday experience. He believes, if somebody is not familiar with the scripts and local shared knowledge then they fail to incorporate in social interaction, thus hindering the opportunity to convert modest interaction into more fruitful relations (Gehl, 1987). To become familiar is to know the rules and modes of engagement in a social relationship, that helps to prolong intimacy. Milgram (1977 in Yücesoy, 2006) called them 'Familiar Stranger' for those who are familiar because of regular encounter, constant meeting and seeing each other but never talked. It may be because the regular encounters often helped to maintain loose ties, like being familiar to one another, but it could not provide first steps towards friendships (Dines et al., 2006).

### **2.6.3 Use**

The regular use of place makes a place special since it provides immense network of memories, associations and stories. Jacobs (2006) argues that, the more frequent the use of a place is, it is more difficult to divide the uses, meanings and experiences of a place because the user create stronger bond with the place. In an urban farm the regular use of the farm



benefits the farmers to know their place well, their neighbor, and their contemporary farmers. Therefore, in a urban farm the uses, meanings and experiences cannot be divided since they are 'intimately intertwined' (Jacobs, 2006). This results in a comfortable environment where the farmers always wants to be.

#### **2.6.4 Safety and control**

It is very important to feel safe at a place. The feeling of safety creates positive territoriality that concern feeling home, positive imagination and place attachments. It helps to increase trust relation (Jacobs, 2006) between people and between people to places; whereas, if the place is not safe people tend to avoid, and retreat (Yücesoy, 2006). Well-being is directly influenced by security from threats to person or property (Glendinning et al., 2003). For the place to be safe there should be a certain extent of control and surveillance. Nevertheless, it does not mean it should be police controlled and monitored using cameras and other technologies. People are effective surveillance agents. In that sense, urban farmers can be community surveillance agent. Not intentionally but effectively, Jane Jacobs (1961) 'eyes on the street' concept is applied in case of an urban farm via natural surveillance. Urban farmers act as an untrained security personnel for the community who could 'witness, report or intervene' crime in case of occurrence (Shaftoe, 2008). As such, it functions as a control mechanism not only among farmers but also to outsiders. Farming also controls people from getting into bad habits by getting them busy and giving them less time to fall for bad practices.

#### **2.6.5 Democracy and Inclusiveness**

Lawson (2005) portrayed an urban farm as a democratic space and farming as an activity that brings diverse groups together in mutual self-interest. As public spaces urban farm is also a democratic and inclusive place where everybody is free to practice farming at his or her own desire. It is a place for all people, and as such there is no class division, no boss and worker or no difference in terms of ethnicity (Lawson, 2005). The urban farm is a gathering place where farmers express their commonality and also learn from their differences (Shaftoe, 2008).

#### **2.6.6 Facilities**

Jacobs (1961) noted that the provision of facilities and resources has direct impact on the social vitality of public spaces. Sitting space, playground, and definite gathering spot serve



as important elements to enhance cohesion. These facilities give purpose to a space (Cattell et al., 2008, p. 553). The facilities in an urban farm are an additional bonus since facilities increase the quality of space that foster 'social inclusion, socially cohesive behavior and citizenship' (DTLR, 2002 in Dempsey, 2008; Dines et al., 2006). A lack of facilities can however limit the quality of people's encounters (Cattell et al., 2008, p. 554; Dines et al., 2006) hindering further friendly interaction besides greeting 'hello'. It causes that their fleeting exchanges could never turn into more meaningful encounters.

### **2.6.7 Stewardship**

Stewardship has the notion of caring for the land. The caring nature can increase the feeling of belonging (Jacobs, 2006) and thus encourage people to care for their landscape. For that good appearance of a place and/or landscape matter because it affects the public perception. If a place is neat and attractive it invites people to use it and promote community support (Hou et al., 2009). This quality is very important in case of an urban farming since neat and clean urban farm encourage other people and passer-by to start farming practices by themselves.

The associations between the urban farm as an everyday setting, the place-use meaning and the experiential qualities along with the various opportunities offered by an urban farming are the antecedents of social cohesion. These antecedents can also be applied as antecedents for community well-being too. Such direct and casual associations can be seen in the simplistic method of equating sense of community (Dempsey, 2009, p.319) because well-being and social cohesion are staggeringly interconnected to each other. Thus, it will be impractical to discuss them as an individual entity. Therefore in the following section I am going to look at the link between urban farming, food security and community well-being.

## **2.7 The significance of food security in terms of finding the link between urban farming and community well-being**

In most of the cases of practiced urban farming the primary purpose to farm is to overcome problem related to food but urban farm also serves to maintain well-being. The interconnected relationship between the food-as a source of economic independence and well-being can be better understood by practicing urban farming. There are many examples of farming practices around the world regarding the role of urban farm in upgrading com-

munity life. But community well-being is primarily influenced by food security in many cases. Therefore, it is significant to study role of food security to find the link between urban farm and community well-being. I have tried to give examples for the case so that it will be easy to get the overall picture.

Urban farming strengthens local relationships between environmentally friendly food producers and consumers through a variety of mechanisms and outlets (Howe and Wheeler, 1999); in fact urban farm deals with food security by bridging a link between food and community. To study about the role, food security can play in terms of finding the relationship between community well-being and urban farm; it becomes crucial to study the case in history where urban farm served such purpose successfully. There are many cases where it can be acknowledge that urban farming has gone through many changes after its time of establishment.

To study precisely about the role food security plays in terms of community well-being and urban farm, there are some examples looked around the world to depict the scenario more clearly. This example is viewed because it resembles the present condition of Kathmandu in one way or the other.

**Table 2.4 Example from America and Europe: from productive to consumptive urban farming**

In America and Europe, economic need was more pronounced during war and after industrial revolution that gave rise to various forms of urban farming; but, at times of relative prosperity, the gardens were developed for practicing community well-being. However, the history of urban farming is not limited to this era. Even before industrial revolution, urban farming was practiced, since thousands of years. During that time, the absence of advanced transport network and modern preservation technique led to production of food close to settlement areas. There was a communal relation between homes, markets, public buildings and sacred places with kitchen gardens, farms and common grazing land that delivered food for the settlement's population (Howe and Wheeler, 1999). But, with the start of the industrial revolution human settlement constantly got aloof from the nature and social dynamics (Hough, 2002) because it invited excessive population growth in the cities. On the other hand, during the beginning of industrial revolution, poor transportation

system hindered the city expansion. The problem was solved by building railways that allowed people to live further from their work place. Thus the industrial cities with dense urban development lacked green spaces and also separated millions of people from contact with food production (Howe and Wheeler, 1999).

The side effect of industrial revolution was that it not only invited environmental problems but also urban poverty, food insecurity and malnutrition (Viljoen et al., 2005). The unhealthy living conditions of the factory workers who were alienated from the nature were of urgent concern to many. To solve such problem open urban spaces and allotment gardens were developed (Howe et al., 2005). These spaces were often viewed as a transitional space, an opportunity to teach immigrants and urban dwellers to love nature (Lawson, 2005). The pressure to economic need was also soaring high during industrialization, which results in various forms of urban farming for food production. Households participated in food growing campaign to grow food for personal consumption, morale and recreation (Lawson, 2005). Consequently, food production within the city, especially fruit and vegetable production in home gardens and allotment gardens became essential for survival.

But, during the time of high economic prosperity, the combined effect of new welfare state and effective full employment cause people not necessary to cultivate their own food (Franck, 2005). Remarkably, people lost their cooking skills and knowledge about food origins, preparation and nutritional values (Kneafsey et al., 2008). Furthermore, urban farm suffered from an image problem. It was linked with war time austerity (Franck, 2005).

However, now recently, there is an increasing concern for energy conservation, protection of nature and environment awareness is increasing (Hough, 2002). This has led to the revival of urban farming but with a slight change in its function. It has shifted from ordinary food production landscape to farming as a leisure activity (Taylor, 2008).

### *Lessons learned*

If a community programs or designs are made in such a way that its functions can be shifted according to demand of time then there are chances that it can last longer. For example, by shifting in the function of traditional urban farms in Europe and America into recreational urban amenities, urban farm helped many cities in these continents to develop sustainable measures in an environmental friendly, social and economical way.

## 2.8 Summarizing theoretical framework

If the urban farm is used as a form of public space where the farmer's intention is not only to produce food but also to meet diverse people then urban farming can be a medium to initiate interaction. Urban farms are also place where people feel comfortable, inclusive and safe. In such environment social cohesion can be obtained which initiate social integration. When a society is socially integrated, it is a step towards social well-being in a community. However, community well-being is a broad concept and it should be noted that social well-being can contribute towards community well-being but its contribution is only partial and that there are many socio-economic factors that influences the community well-being.

### Lists of concepts

- Urban farm as public space
- Food security
- Familiar Stranger
- Social interaction
- Social cohesion
- Social integration
- Social well-being
- Sustainable communities
- Bonding and Bridging

## 2.9 Research questions

The general objective of this thesis is to examine to what extent urban farming provide opportunity for the people of Kathmandu to outshine the lack of feeling of community. This general objective along with the framework developed above helped me to formulate guidelines to form specific research question: **how can urban farming help the people of Kathmandu to know each other?**

The main research question was further supported by additional three sub questions. These questions were related to the chapters followed afterwards. It also guides to choose the field study locations and define interview questions.

### **1) How is traditional community life practiced in Kathmandu? What factors contributes to the decline in previous community life?**

In this part I will look at traditional community life in Kathmandu, its social structure and caste division and role of rituals and festivals. Later I will look at the factors that cause decline in community life. And will look if there are other factors that contribute in such decline.

### **2) What is the primary reason for people of Kathmandu to do urban farming? What notion of community well-being is best served by urban farming in Kathmandu? What function does urban farming serve for the urban farmers of Kathmandu?**

For this part, I will do some field studies to look at if there is social interaction between farmers than other urban people that lack open space. During field study I will also research for the answers on questions like; Are there other factors that that determine the well-being in context of Kathmandu? Is farm one of the special places where farmers want to be? What special meaning do these farms have for the farmers? Are farmers aware of the opportunities offered by their urban farm? I will than explore the everyday relation of urban farmers towards their farm to answer the last question.

### **3) What is the future of urban farming in Kathmandu? Is the role of government important to establish successful farming practice in a city?**

In this part I will discuss the overview of overall farming practices that is going on in Kathmandu and try to explain where exactly the urban farming practice is heading. Later, I will give a brief overview on what the Government did to improve farming activities, like looking into policy documents to see if the government policies was also implemented in case of urban farming. I will discuss this in my conclusion.

## **2.10 Research Framework**

The research framework has been formulated to ensure that the research objective was accomplished. At general level, I did literature study to look at broader picture of urban farming, its meaning and function. With the literature study theoretical framework for the study was formulated. As the second level of my research, I unveiled the connection between traditional community practices and urban farming in Kathmandu. Then the research further narrowed down to the farming practices of Kathmandu. The motive of all the field study was to study everyday life of the farmers and see if the farmers were able to contribute to the well-being of their respective communities. Then, I concluded my research by discussing whether my objective was fulfilled or not. Lastly, I suggest some necessary recommendations.

## **2.11 Structure of the report**

This report consists of seven chapters. Chapter 1 is the introduction chapter. Chapter 2 presents the theoretical framework and research questions. It is a literature study about the meaning and functions of urban farming. Chapter 3 looks at the overview of Kathmandu in term of its social formation and their inter-relation with the farming practices, culture and tradition. Chapter 4 looks into the methodology and field study location. Detail insight has been given in the chapter to the reasons for choosing particular field study locations. Chapter 5 looks into the results from field study interviews and observations. This have been divided into general overview and detailed overview to minutely discuss the findings. Discussions in Chapter 5 are focuses on answering research questions. The last chapter, chapter 6, verifies whether hypothesis presented in chapter 1 is valid or not in context of Kathmandu. Finally it concludes by giving a general overview and then provides some recommendation to motivate farming in Kathmandu.

## **2.12 Conclusion**

Much has been studied on the role of urban farming as a public space in the western society; however there is still a need for study in Kathmandu that demonstrates the importance of urban farming in the everyday life of urban people of the valley. Therefore, in the following chapter, I intend to study in depth the community life in Kathmandu in relation to farming practices.

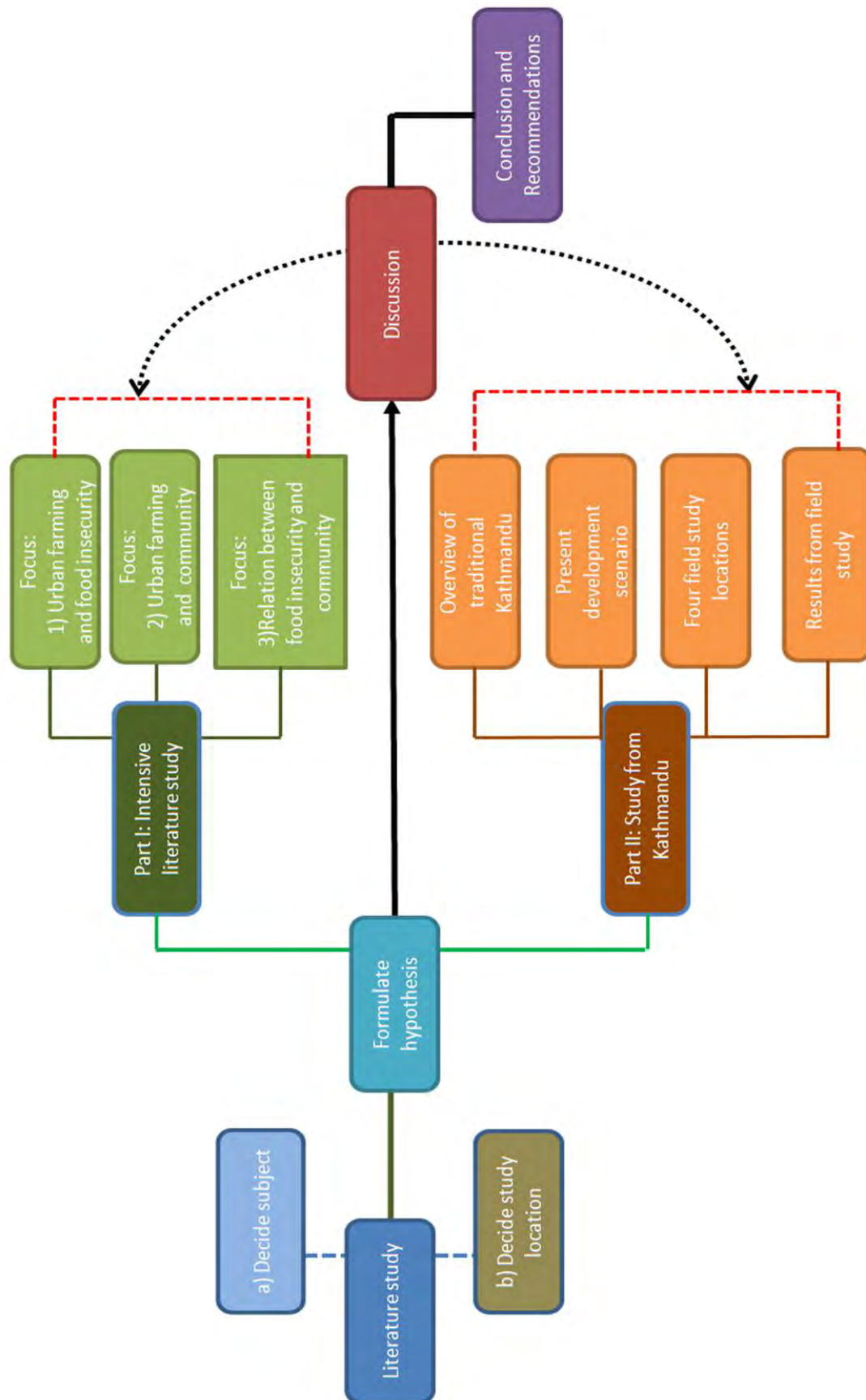


Fig. 2.1 Research framework





# chapter 3

## Overview of Kathmandu: Study of Past and Present Society



Farmer looking at ancient city Bhaktapur from his farm land

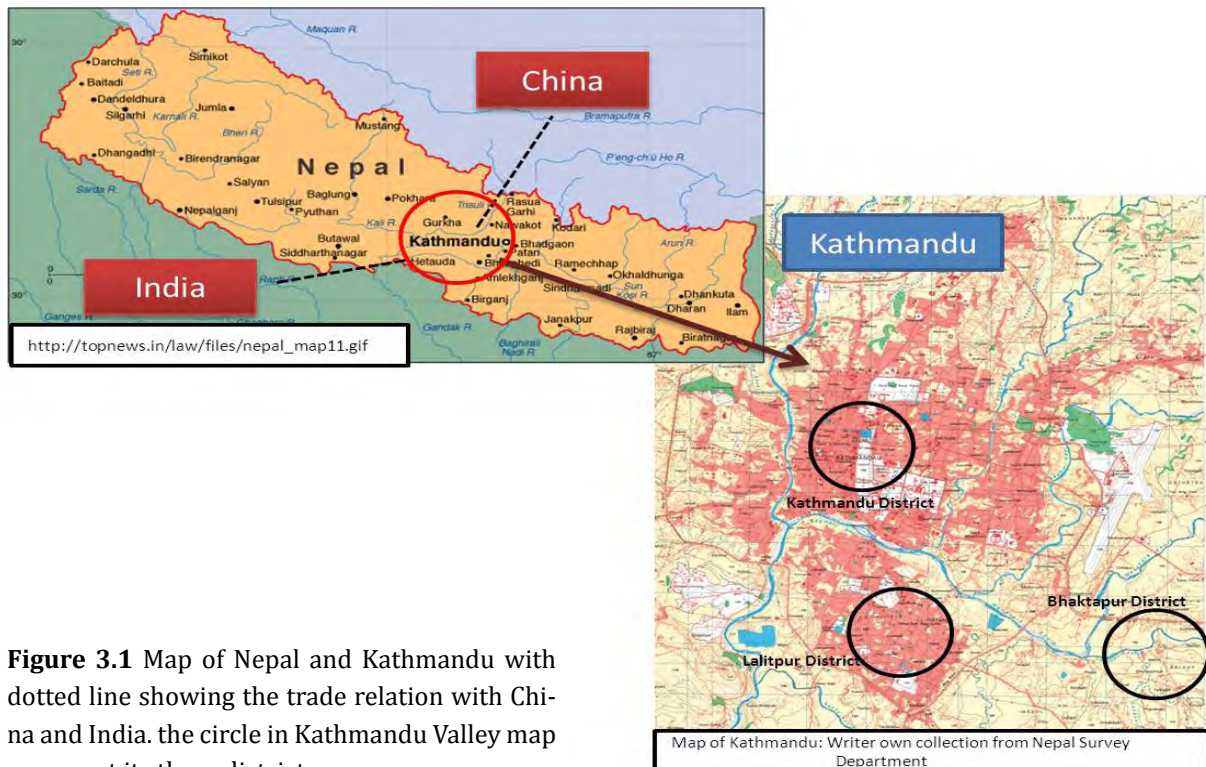
Source: [www.google.com](http://www.google.com)



In this part of the report I intend to give an overview of Kathmandu valley. Although the research aims to study the everyday life of the farmers in Kathmandu, it will be incomplete if the background knowledge, like the history, city morphology is not taken into account. Therefore, at first I will give a brief overview of past and present society of Kathmandu. The aim of this chapter is to enhance reader knowledge about the traditional life practices of valley people, factors guiding their behaviour and scenario of present development. Later the chapter deals with the issue of how culture and rituals followed in agriculture practice leads to an agricultural urbanism. It is further explained with an example from traditional agriculture society.

### 3.1 Urban morphology of Kathmandu valley

The role of Kathmandu valley as a center of trade and a contact zone between China, Nepal and India (Subedi, 1995 in Subedi, 2010) during Malla<sup>1</sup> Period has attracted people since early times. The locational advantage of the valley and favorable natural environment made it possible for the three largest cities of Nepal and the numerous small settlements to grow in the valley within a relatively small area. The fertile soil in the valley, which is often cultivated throughout the year, provides the prerequisites for the foundation of a city (Müller, 1981).

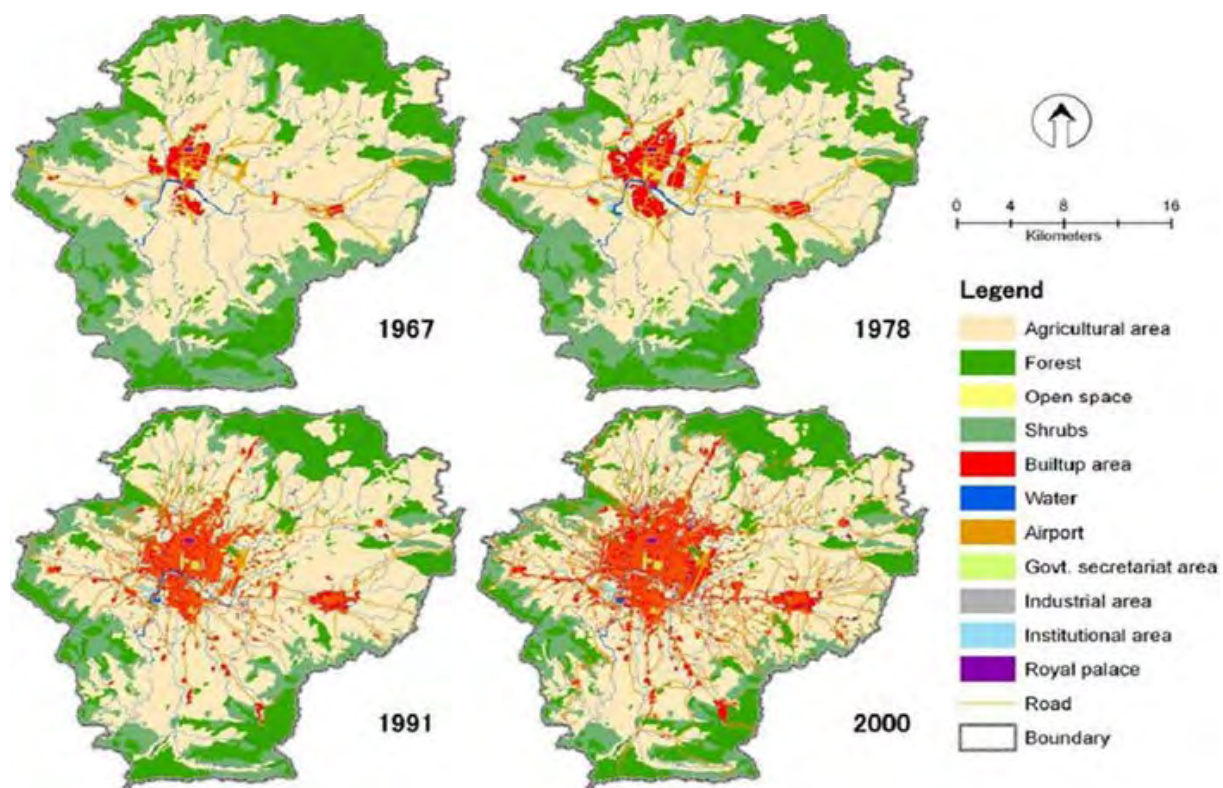


**Figure 3.1** Map of Nepal and Kathmandu with dotted line showing the trade relation with China and India. the circle in Kathmandu Valley map represent its three districts

<sup>1</sup> Malla: ancient ruler of Nepal in 12th century

### 3.1.1 Administrative boundary

The Kathmandu valley consists of three districts-Kathmandu, Lalitpur and Bhaktapur with an area of about 899 km<sup>2</sup> (CBS, 2001). It is bordered by the ridgelines of the mountains surrounding the Kathmandu valley. It covers 81% of the Kathmandu District (395km<sup>2</sup>), 32% of Lalitpur district (385km<sup>2</sup>) and the whole of Bhaktapur district (119km<sup>2</sup>). There are altogether five municipalities and 131 village development committees in the entire jurisdictional boundaries of the three districts. The national density of urbanized area of the Kathmandu corresponding to five municipalities is 182.90 populations per square kilometer (CBS, 2001). Kathmandu shelters approximately 2.35 million people in an area of only 900 square kilometers registering itself as one of the highest population growth rate cities in the world. From 1991 till 2001 the inter-censal growth rate of population in Kathmandu was 4.67% against national total population growth rate of 2.25% per annum (Subedi, 2010). An indication of this accelerated growth can be seen by the rate of growth of Kathmandu district, which is estimated to be 4.71 percent per year (ICIMOD, UNEP and Government of Nepal, 2007 in Adhikari, 2008). The rapid growth of Kathmandu today owes much to the migration that results in unique ethnic diversification (Dahal, 2005).



**Figure 3.2** Progressive urban growth of Kathmandu Valley from 1967 to 2000

### **3.1.2 Ethnic diversification**

Kathmandu is a multicultural society formed by a unique multi-ethnic and caste society (Dahal, 2005); most settlements are ethnically mixed and shared by Brahmin, Chhetri, Newar, Tibeto-Burman ethnic groups, and traditionally untouchable occupational caste groups (Upreti, 2004). Known historically as a Newar settlement, Kathmandu the capital city of Nepal accommodates at least 67 ethnic groups out of 103 ethnic groups in total (Subedi, 2010). Since, capital cities are among the most ethnically diversified locations in most of the nation-states of the world, it is quite natural to assume Kathmandu to demonstrate high level of ethnic diversity. At present, Kathmandu with an area of 900 square kilometers and a total population of 2.35 million is not only the most urban city but also the hub of cultural-religious, political-administrative and educational activities in the country (Sharma, 1989, 2006; Haffner, 1981, 1982 in Subedi, 2010). As Dahal (2005) points out, the motto of Nepal 'unity within diversity' can be well explained when viewed through the capital city. Thus, Kathmandu is a socio-geographic microcosm of the nation and as a whole it demonstrates high ethnic mosaic. The unique identity of Kathmandu today at national and international level owes much to the ethnic diversification and migration. As a multiethnic country, Nepal characterizes rapid growth of population; ethnic diversification that is a result of internal mobility and increase exposure of various groups with outside world (Subedi, 2010).

## **3.2 Everyday life in traditional communities of Kathmandu valley**

This chapter looks in the everyday life of traditional communities of Kathmandu valley that was in a way interconnected with the way they live and communicated in a society, shaped by culture and festivals.

### **3.2.1 Urban way of life in traditional towns: practicing sustainable communal living**

The traditional settlements in Kathmandu Valley are characterized by the dispersed urban settlements of small sizes (Müller, 1981) with settlements located on ridges fallow and un-irrigated hill tops (Tiwari, 1999) reason for such close-compact settlement is the need for the defense mechanism that was significant at that time. Another reason for the dense housing was apparently to maximize land suited for agricultural purposes. This very conscious ecology sensitive tradition emphasized the preservation and use of irrigable slopes and the fertile plain lands along the river banks, for agricultural purposes (Nepali, 1965 in Müller, 1981; Tiwari, 1999).





**Figure 3.3** Compact traditional settlement located on ridges fallow and un-irrigated hill tops



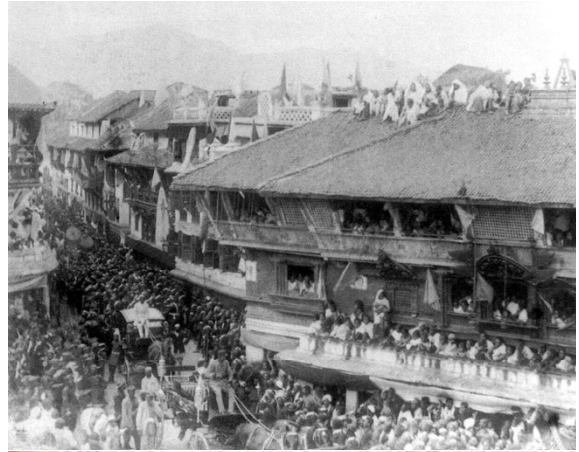
**Figure 3.4** Festival celebrated in surrounding of Annapurna Temple (Goddess of crops)- the temple is covered by puffed rice to celebrate the harvest



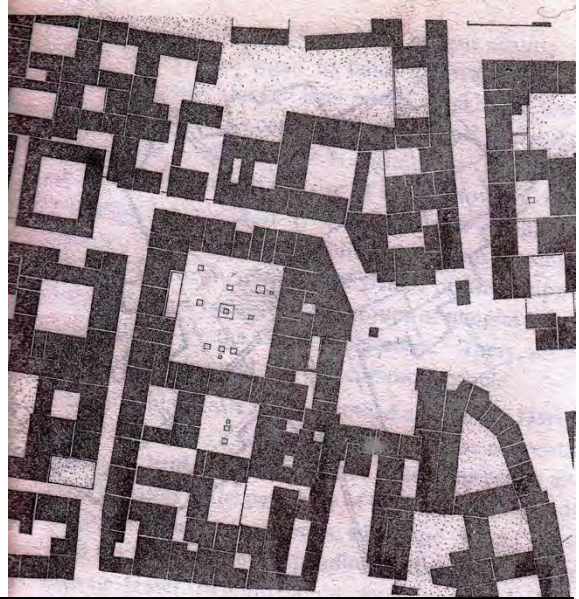
**Figure 3.5** Festival celebrated in agriculturally lean seasons



**Figure 3.6** Street and alleys used for festivals



**Figure 3.7** Example of typical Tol-each Tol have their own coutryard



**Figure 3.8** Layout of Traditional town square-Plan and Aerial view



Indeed, the linkage of the surrounding agricultural land to the town was specified clearly by the structure of the settlement and continued through religious and cultural behavioral pattern popularized by rituals and festivals. This rituals and festivals enable the regulatory controls needed to administer through several generations in future (Tiwari, 1999). The Lichchhavis<sup>2</sup>, with their large number of anthropomorphic gods, developed temple centric towns patterned that were bounded by several other temples. During this time, more festivals based on Hindu-Buddhist faiths were added. According to the religious faith, cities should not only be built to be functional; but they must also be equipped with cosmic qualities. The principles of cosmic qualities is that, the cities must be laid out and equipped in such a way that the necessary ritual ceremonies which ensure that the relationships of human beings to God is continually renewed, and can be carried out often (Müller, 1981, p. 13).

### 3.2.2 Settlement pattern: what makes traditional communities

The tendency of the different, ethnic groups to segregate themselves from each other is demonstrated in the traditional settlement pattern (Müller, 1981, p. 11). Each traditional settlement is divided up into several areas called *Tol* with each having their own individual courtyard. These *Tol*'s grew up through the division of the various occupational, religious and social groups. The *Tol* boundaries are by no means administratively laid down. Even today certain castes and occupational groups live in a certain *Tol*. To have greater social contacts with each other than with the inhabitants of another *Tol* play a dominating role there. If a person is asked where he lives, he will not name his house, but his *Tol* where he actually comes from (Müller, 1981).

Adjoining each *Tol* is a certain *Shrine* (Temple) with its own *Pati* (building with simple covered verandah), *Dabu* (stone raised platform) and *Sattal* (house with several storeys). These are the prominent elements in traditional architecture. *Dabus* are high platform used for performance and dances. Since, the platform is high; it is used for drying when no performance or dances are carried on. And, *Sattals* are usually used as store room or as temporary shop space for hair dressers, butchers and grocers; or resting space for travelling labors, pilgrims and monks to stay overnight.

The reason for such communal space is to compensate the farmers need for the extra space. Since, the traditional houses are compactly built to maximize more utilization of agriculture land only few requirements can be met in their own houses. A farmer's house also does not have efficiently farm house, stable or barn. So, the harvest is dried in the courtyard, *Pati*, *Dabu* and on the streets. These public areas are utilized to the utmost. Everyone has the right to use public areas. Squares, courtyards and streets are also used

---

<sup>2</sup> Lichchhavi: ancient ruler of Kathmandu valley in fifth century AD



by the children as play areas. People wash and do their washing at the taps, wells and in the tanks. They sit in front of the houses for general interactions and in the evenings they play music together. Festivals are celebrated and rituals are carried out there. For them street is a communal living room. Thus, the private lack of space is often supplemented by the plentiful public areas (Müller, 1981). Few activities were performed privately; like cooking food is regarded as something very private.

However, a line between private and public is in many ways are not drawn in daily life. Similarly, there exists no distinction between the sacred and the profane. In modern days, the places like the sacred *Shrines* and *Bahals* have catered to become their everyday setting. People use these sacred spaces for everyday purposes just like the other public areas. In the temple forecourt one can see daily basis of card players, nobody would bother to prohibit them from doing so, and nobody would dream of throwing the children who play there, out of the temple. Even dung can be washed and chilies can be dried on the *Shrines*, without impairing their religious appeal and meaning. The streets take new importance when they are used for processions (Müller, 1981, p. 3). By providing the communal spaces, it has increased the liveliness of the traditional towns. It made the community.

### 3.2.3 The role of culture and festival in traditional city planning and social classification

The material presented in this section is taken from Tiwari (1999). In the ancient time various rituals and festivals were developed in the valley to remind the city people of their limits. It made them realize that the protection of town was dependent on the protection of nature and its micro-ecology. This was done through the careful planning of the Pith<sup>3</sup> that was always located in ecologically important site, such as clump of trees, rock spur, spring source of water, hillock and the similar found within the agricultural hinterland of individual settlements. Because, the traditional settlement of Kathmandu was usually dispersed with its own rituals and festivals, the placement of Pith in ecological site ensured that urban expansion did not interfere with nature. Festivals and rituals were framed to guide public behavior for protection of faraway sources and water sheds. These were in addition to legal parameters to ensure use of ritual mediation, which was framed on prevailing religious faiths. Such ritual meditation relied on ethics, individual faithfulness and emotionally guided inner discipline.

Despite the fact that, the traditional settlements were condensed into rituals and festivals, the capital towns became much larger; and the dispersed towns grew further beyond the ability of one nature protector. The effectiveness of the single Pith got challenged due to increasing mix and complexity of religious faiths among the people. However, the tendency of towns to expand outward damaging immediate economic and ecological resources

---

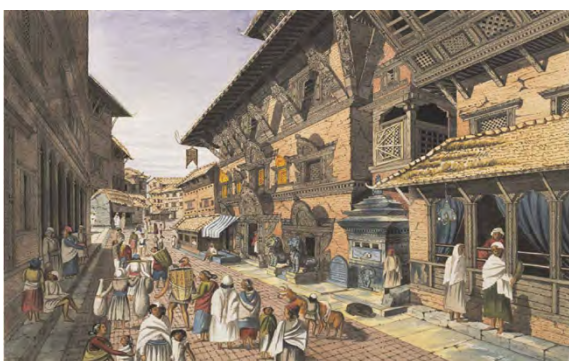
<sup>3</sup> Pith: natural abode of the godly spirit



**Figure 3.9** People gathering and buying and selling animal near Maha baudha Vihar (Buddhist monastery)



**Figure 3.10** People selling vegetables in city square Basantapur

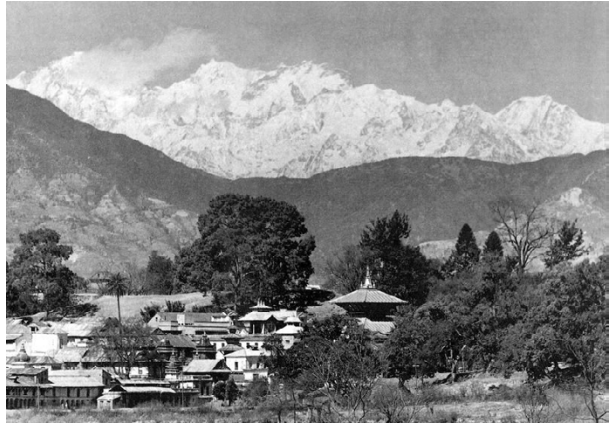


**Figure 3.11** traditional street scene of Kathmandu Valley

**Figure 3.12** Swayambhu Stupa in the hill top- agriculture field and Vishnumati river in its basin



**Figure 3.13** Hindu Temple Pashupati- river Bagmati flow by its side and mountain Ganesh in its background



**Figure 3.14** farmer ploughing his field in the background-Boudhanath Stupa



had to be controlled. This was tackled through the use of a major social reclassification of population on the basis of professions, called *Jaat* (ethnic diversification). The city was zoned by *Jaat* that created pockets of strong harmony linked to family clan and similar profession at the same time. Each pockets centered on a tutelary image such as *Ganesha* (Major idol worshipped by both Hindu and Buddhist). The central part of the settlement was replaced by the palace and the royal tutelary. This was possibly a response to the fact that the central areas of the town were occupied by the nobles subscribing to the *Jaat*, administration and political leadership, who was guided by ruling power.

To deal with the large extent of the town, several Piths, numerically eight, were spaced in-between the town center and its boundary. The corresponding Piths defined the boundary of the town. Piths were the frontier of the settlement beyond which the expansion of the settlement was unusual. The clear demarcation made by the boundary line was fruitful in terms of declaring land for agricultural purposes. Those lands were fertile and close to river. Guthi<sup>4</sup> was formed for the protection of the farm land from negative encroachment. The main function of Guthi was to construct foot trail and Ali Bato<sup>5</sup>. The existence of the Guthi discouraged the development of infrastructure in the farmland.

Religious rituals, festivals and taboos were charted and popularized to ensure that the piths remained the perimeter of the town. Subsidiary temples and potent sites were dispersed in its hinterland at places of micro-ecological importance. Festivities were extended and annual socio-cultural events were put in the calendar to link these spatially and emotionally to the town and its specific zones.

### 3.2.4 Agricultural urbanism in the past

*"Agricultural urbanism is a planning, policy, and design framework that focuses on integrating a wide range of sustainable food system elements into urban planning projects and neighborhoods"*

cf: <http://www.agriculturalurbanism.com>

The location of dense town on fallow ridges reduced the town to a no-greenery inside situation that encouraged the process of formation of micro-heat & waste sub-structure. Through sensible design and local material usage, infused with religious and physical threats, the ancient city planners practiced agricultural urbanism by taking advantage of the warmer micro-climate of the town. They developed sustainable systems to collect night soil from the city and dispose to surrounding farms. Interior courtyards formed by

---

<sup>4</sup> Guthi: land ownership arrangement for religious purposes. Such lands are either allocated or owned by the state or by individuals for a religious philanthropic purpose.

<sup>5</sup> Ali Bato: narrow road to the farm



groups of houses were used as Saga:<sup>6</sup>. Periodic cleaning of Saga: and other city elements that tended to become polluted were also given religious imagery that demanded constant cleaning cycles. By locating festivities in agriculturally lean seasons, the society mobilized and capitalized voluntary labor in a cultural trend by rooting belief in people that such performed rituals are for better life in next birth.

Apparently this was not adequate when the town grew in size and thus towns provided lung space through several khyos<sup>7</sup>, located inside the perimeter of the town. Town level festivities were assembled in annual cycles, to ensure that town expansion does not eat up those. All these show that socio-cultural codes and ethics of behavior favorable to the health of the urban community and the ecological character of hinterland were consciously monitored and meticulously followed. The medium of implementation of agricultural urbanism were socio-cultural practices that were able to bring the town to act together ethically.

### **3.3 Present context of development in Kathmandu: The causes for the lack of feeling of community in present Kathmandu**

This section looks into the present development trend of Kathmandu. The section is divided into three subsections. The first subsection looks at the changing political power and the misuse of political power and its consequence. The second subsections look at the current development trend of the Kathmandu valley. The last section looks at the factors that affect the development and causes lack of feeling of community in the present society.

#### **3.3.1 The changing political power and its effect**

Between 1846 and 1951, migration into Kathmandu valley was tightly controlled by the Rana's and population growth was more or less limited to natural population growth. As the Rana<sup>8</sup> took over available large chunks of land around the traditional cores of the towns of Kathmandu and Lalitpur for their huge palaces, the town's physical expansion was decidedly curbed. Even without such 'physical barriers', the third town of the valley, Bhaktapur, said to have been reorganized with 12,000 households in the twelfth century, had been contained within its traditional perimeter defined by the piths of the Eight Mother Goddesses and its population remained at its original design size of about 60,000 to 1970. However, following the sixties, as the new political, administrative and economic

---

<sup>6</sup> Saga: : a composting place for vegetable waste

<sup>7</sup> khyos : large chunks of open green space

<sup>8</sup> Rana: rulers of Nepal from 1846 to 1951 who upsurge all power from King and appoint themselves as hereditary prime ministers

structure of Panchayat<sup>9</sup> gained ground. The Panchayat regime failed to fulfill the aspirations of the people. It maintained unequal relations and vertical social structures giving more power and privileges to conventional local power groups (Upreti, 2004). The poor people and lower caste suffered more (Upreti, 2004). Popular uprisings brought the collapse of the Panchayat system in 1990. Since then a parliamentary system is governing the country with constitutional monarchy till 2009 and General republic since then. During the twelve years of multiparty democracy, all major political parties governed the country with an extremely poor performance in terms of economic growth, poverty reduction, human rights, social security, and development. The Maoists mobilized these frustrations and launched an insurgency in 1996 that pushed the country into crisis and on the verge of collapse.

Because of the constant changing political situation, the government lacks enough power and money to use in the development works. On the one hand, the powerful people started random urban expansion of Kathmandu and Lalitpur towns whereas, poor people lacked access to productive land resources and therefore they are struggling to establish their right over land. It is estimated that the top five percent of the population control 40% of agricultural land and the bottom sixty percent control only 20% (Upreti, 2004, p. 374).

### 3.3.2 Current development in Kathmandu



**Figure 3.15** Haphazard city growing-Kathmandu

At present, the growth of settlements in the valley is spontaneous and haphazard. This process has gained such speed that it has literally broken all boundaries including the ecologically established social principle of building just in the fallow land. There is very little planning intervention from the government part. The government also does not have financial resources to acquire huge parcels of land to promote planned

urban development. The current constitutional provision does not allow the government to impose any kind of restriction on the use of private property. Hence the government has only one legal tool to regulate and use, e.g., provision of infrastructure (Pradhan et al., 2007). But, limited and insufficient development of urban infrastructure, particularly roads, leads to an octopus growth pattern that follows roads linking one town to another or the towns to the villages in the hinterland. Today all the agriculturally productive lands

<sup>9</sup> Panchyat: partyless system with absolute Monarchy

and river plains between Kathmandu and Lalitpur are virtually buildup and the two towns make one physical mass. This process is so emphatic and clear that the planners have proposed town extension program, which will reinforce the trend rather than fight it.

### **3.3.3 Factors affecting the lack of community in Kathmandu**

Kathmandu is marked by existing poverty, limited employment opportunities, deteriorating agricultural productivity, internal armed conflict. This has brought the extreme case of migration in the capital city and out of the country (Bhattarai, 2005). During insurgence period there was a rapid influx of people to the Kathmandu from all over the country. The public of the villages which was under Maoist stronghold has no other option then to take part in the war to help Maoist or leave the village. This has cause huge migration to the favorable places where influences of Maoist were less noticed. Such situation had consequence bad for both the cities and the villages. In the one hand, the traditional communities of the villages were defragmented and some communities totally collapsed whereas, in other places new communities were formed. The new communities formed have different life style and new neighbors whose worldview was different from theirs. The change in the surrounding and the lack of better opportunities in term of education and employment opportunities caused that these people have to constantly struggle to fulfill their basic needs. Such communities formed also lack the feeling of community as in the past. Indeed such communities do not have any community.

While the internal conflict of the country displaced many people from their usual place of residence, the conflict has also limited the development activities throughout the country; the industries were closed. This resulted that people lost their jobs hence resulting in mass unemployment. Thus for them the alternative means of employment was to go abroad for work (Bhattarai, 2005). Huge number of Nepalese workers went abroad for work. It can be justified from the following fact. The total stock of Nepalese nationals working overseas (excluding India) in different capacities is estimated to be about half a million (ILO-DFID, 2002 in Bhattarai, 2005, p.8). This has also cause lack of feeling of community in the current society.

At present the country's reliable source of income is from remittance. But because of it, the inflation rate of the country is far higher than the income growth rate. Nepal Rastra Bank (2007 in NRB, 2010) defines inflation as, "the persistent rise in the general price level across the economy over time". They consider mild inflation desirable for economic growth. However, they mentioned that high and variable inflation, in general, leads to uncertainties in income and expenditure decisions of the different groups of the society; distorts economic growth; lowers savings and investments; and makes more expensive cost

of capital. It is also likely that high inflation raises unemployment further (Friedman, 1977 in NRB, 2010). This inflation has further increased the economic inequality in the society that consequences vastly in the lack of social cohesion in a community.

### 3.4 Conclusion

Traditional communities of Kathmandu gave high priority to be part of the community. Traditional People would say the name of their *Tol* when they were asked where they live. The community tie was constantly strengthened by farming practices and various festivals celebrated during agricultural lean seasons. But at present, because of haphazard development, Maoist insurgence, mass migration and lack of employment opportunities there is a decline in community feeling. In the chapters following afterward, I will look at different areas in Kathmandu and see whether urban farming can be used as a tool to regain the feeling of community or to make the newly established communities feel part of the society and make responsible for its well-being.







# chapter 4

## Methodology

### **4.1 Methodology**

The purpose of this chapter is to explore methods applied to find the answer to research questions. Qualitative case study method has been applied in this thesis report that is followed by empirical research in Kathmandu. Many photographs are presented in the text where needed since, photograph can often tell you more about the situation than any amount of text. The field study is proposed to look at the everyday life of urban farmers of Kathmandu to see if urban farm can really improve community well-being.

### **4.2 Qualitative case study method**

In this methodology section, I applied Qualitative case study method to know about the micro-social daily life of the people of Kathmandu. The qualitative case study method is used when researcher address descriptive or explanatory questions that aims to produce a first-hand understanding of people and events. Since, it examine a case in depth in a real life setting (Yin, 2004) therefore, through this case study method, I intend to find the descriptive explanation of two of my research questions. They are: what notion of community well-being is best served by urban farm in Kathmandu? And, what kind of benefits and challenges do urban farmers in Kathmandu find in their everyday farm life? The advantages of quantitative research method is the close collaboration between the research-



The purpose of this chapter is to explore methods applied to find the answers to research questions. Qualitative case study method has been applied in this thesis report that is followed by empirical research in Kathmandu. Many photographs are presented in the text where needed since, photograph can often tell you more about the situation than any amount of text. The field study is proposed to study the everyday life of urban farmers of Kathmandu to see if urban farm can really improve community well-being.

#### 4.1 Qualitative case study method

In this methodology section, I have applied qualitative case study methods to know about the micro-social daily life of the people of Kathmandu. The qualitative case study method is used when researcher addresses descriptive or explanatory questions that aim to produce a first-hand understanding of people and events. Since, it examines a case in depth in a real life setting (Yin, 2004) through this case study method, I intend to find the descriptive explanation of two of my research questions. **‘What notion of community well-being is best served by urban farm in Kathmandu?’** And, **‘What kind of benefits and challenges do urban farmers in Kathmandu find in their everyday farm life?’** The advantage of qualitative research method is the close collaboration between the researcher and the people in the study area, where the participants can tell their stories (Crabtree & Miller, 1999 in Baxter and Jack, 2008). Through these stories the participants are able to describe their views of reality and this enables the researcher to better understand the participant’s actions (Lather, 1992; Robottom & Hart, 1993 in Baxter and Jack, 2008).

For ease of research, I categorized communities of the valley into homogeneous and heterogeneous communities. In this report, homogeneous community is the cluster of kin and people with same ethnicity living in the same community. In case of Kathmandu, they are mostly native Newar’s of the valley. They predominantly live in or around the densely populated traditional core settlement areas whereas; heterogeneous community is multi-ethnically mix communities that live either in core settlement areas or in new settlement areas. These people are mostly migrants and new to the valley as compared to the native inhabitants. The homogeneous community in Kathmandu was seen to have prominent social assets derived from strong supportive bond between kin or members of their family group, while heterogeneous community have weak ties that connects individual to dissimilar groups of different ethnicity and additional resources (Grano Vetter, 1973; Putnam, 2000 in Cattell et al., 2008).

Before proceeding to the detail field study, I toured around the valley to get the general overview of urban farming situation in Kathmandu. This helped me to choose field study

locations as well as to know the prevailing farming practices in the Valley. The situation in Kathmandu was very dramatic, as on one hand most of the fertile lands were rapidly being converted to residential buildings whereas, on the other hand most of the road corridors, river banks and unused fertile lands<sup>10</sup> were cultivated by deprived peoples to overcome extreme price inflation. These deprived people fall both in homogeneous and heterogeneous communities.

Four case study locations were selected namely: Saligram Bal Griha urban farm, Pulchowk Engineering Campus urban farm, Thapathali urban farm and Sankhamul urban farm. Multiple field studies at different locations were done to understand the similarities and differences between the cases (Baxter and Jack, 2008). These field study locations were chosen based on major two criteria; first, types of communities and second, their reason to farm. Even though the field study locations were only four, each of the farms have different context because of their diverse reasons for establishment, background, and locational advantage. Thus, these four farms represent a holistic picture of the farming in Kathmandu.

Among the four case study locations two locations; Saligram Balgriha and Pulchowk Engineering Campus Urban farm falls into heterogeneous community. Even among these two urban farms the reasons for their establishment were different. Saligram Balgriha was established to overcome acute food insecurity problem while the other urban farm was established to provide common platform that facilitates in bringing diverse multi ethnic campus staffs together. While, Thapathali and Sankhamul urban farms are the two homogeneous communities, among many traditional urban farms in Kathmandu, these two locations were chosen for study because of the unique meaning these farms gives to traditional farming practice. All the farmers in Thapathali have already sold their farm land or built residential houses in the farm land. However, they are now occupying flood plain of the river bank adjacent to their traditional farm to continue farming to overcome food insecurity problem and preserve their local profession.

Whilst in case of Sankhamul there were eight groups of middle aged women doing farming together. They were doing farming to utilize their extra free time beside their regular household work. It is quite uncommon in traditional urban farm to practice farming with other people other than from the member of their own kin. These women did farming not only to utilize their free time but also to provide healthy organic food to their family.

---

<sup>10</sup>Unused fertile lands: owned by some person- may or may not live near the vacant land - that kept their land vacant to build house when favorable





**Figure 4.1** Heterogeneous community urban farm

a. Saligram Bal Griha Urban farm

b. Pulchowk Engineering Campus Urban farm





**Figure 4.2** Homogeneous community urban farm

a. Thapathali Urban farm

b. Sankhamul Urban farm



## 4.2 Observation and interview

The field study was done through observations and open end interviews. Observation is mostly used to imply behavior of people. During the field study I was particularly interested in studying the interaction patterns among the farmers; their level of intimacy and closure between them; and to know how they appropriate the farm to develop their place-use meanings. For this, I conducted participant observation since, it helps me to immerse myself in the research setting, so that I can experience and observe first-hand information (Mason, 2002). Additionally, Mason (2002) also mentioned that observation can be helpful when studying large groups, social connections and phenomena like daily routines and conversations.

To study the farmers groups and their connections in their everyday life, I tried my best to engage in activities appropriate to the situation and observe the farmers activities, the farming atmosphere and physical aspects of the farm. I did this mostly in homogeneous community where the women were too shy to give an interview. I also had an additional advantage of being from same ethnicity (Newars); knowing language and tradition was an additional benefit in my case. Besides that, observation was also conducted at several levels of active interaction by using different ways of involvement. Sometimes I was socializing in the conversation while sometimes I was behaving as the part of the community– by helping them take the unnecessary weed from the soil. So, in that sense I was participant, in a way that I copied the farmers' behavior whom I was observing. By listening to their conversation, information was gathered that concerned their activity related to farming. However, only by observation the underlying motivations of people are not visible. That is why, using more sources of data next to observation, like for example interview, becomes important. Conducting interviews is a widely used method within the social sciences (Yin, 2009) and can have several different goals, which depend on the type of interview; like structured, semi-structured, group or depth. The interview for this research was conducted for a month from mid- December 2010 to mid- January 2011. Twenty people were interviewed-five men and fifteen women. Their age, gender, ethnicities were also noted. I applied semi-structured approach, because it helps me to know 'why' and 'how' of the research questions. The respondents were asked their primary reason to do urban farming. The question asked were, to what extent does your urban farm help to overcome rising food price in Kathmandu? Does your farm provide you with social space where you can meet people learn some skills and spend your time productively? (For this question some hints were given like, urban farm as a meeting place, a way to counter balance urban congestion, economic stability etcetera); does your urban farm bring environmental awareness? What types of problem do they face during farming? Are they willing to do farming if the problems related to farming were solved? Do you think government involvement

is necessary for urban farming? This enables me to go into details of interesting facts, while maintaining general outline throughout the interviews. A possible downside of this method is that going into details may lead to an overexposure of some elements that are of interest to the researcher.

The time with each respondent varies. Some respondent were very enthusiastic to talk about their farming experience and their memories while some respondent were very shy to answer. In the field study, I noticed that when I approached the potential interviewees with the question, if they would like to answer some questions concerning their urban farm. The farmers in homogeneous community became very nervous and tried to skip the interview with excuses like, "I don't have time today; can you come later when my husband is also there..." They were afraid that I may publish their interview in some newspaper and their husband, their son may not like that, or they were afraid that their illegal farming will get noticed because some of these farmers were not the legal owner of the farm. So, I had to visit them often to make them feel comfortable before I interviewed them. Therefore, later during my field trip to homogeneous community I tried to put certain nonchalance during the interview and did not mention the farmers that I was interviewing them. This was done so that they would not change their behavior. Whereas, in heterogeneous community the farmers abruptly replied positively to my offer, they were enthusiastic to share their experience and their knowledge about farming. Detail note were collected for field studies, observations and interviews. After the interview was conducted, the farmer's narrations were transcribed into more legible format.

Through observations and interviews, information about the everyday use of urban farm and various setting urban farmers use for interaction among each others were known. The observations and interviews provided me with reliability because the overview of the study area was possible more extensively. Because of this, the quality of the study was improved. It also provided me with additional benefits that the methods can be compared with each other and checked whether the results are coherent. Also, it increased representativeness, by having more repetition within the study. By using different methods, the outcomes can be compared to each other and the number of measurements will increase (Andini et al., 2010); this is beneficial for the representativeness of the urban farmers in Kathmandu Valley. However, because of time limitations, the amount of measurements might still not be high enough. This could be improved in further research by taking more time to do the field work.

Like many other qualitative research theorists, my framework for the research were not analytically executed, but retrieved, identified and discovered from the interview data (Strauss and Corbin, 1998 in Peters and Haan, 2010, p. 7).

### **4.3 Conclusion**

The reason for choosing the particular research method has been discussed and the overview of the four study location was made in the above part. Now in the next chapter, the field study locations will be described in detail and the results from the field study locations along with the interviews and detailed observation will be discussed.



# chapter 5

Results from interviews and  
observations



In this section, the detail overview of the field study location is presented. It is then followed by the result of the field studies. The result is an outcome of intensive interviews and field observations. The result is constantly analyzed with the guideline formulated from the theoretical background, chapter 2. It is constantly checked so that the entire concept obtained from the theoretical background chapter is included during result analysis. The result is categorized into two sections. The first part is the results from the general overview of the four study locations. This part mostly consists of the narrative story of the urban farmers themselves. They describe their attitudes towards the farm and what problems and benefits they find in their farms. The second part consists of results from the detailed overview of the four study locations. It is mostly the researcher own observations that is verified by farmers as well.

## 5.1 Urban farm tours

The urban farm tours of individual farm are provided in this section to provide overview of the site locations to the reader. There are four urban farms in total; two each from homogeneous and heterogeneous community. The following first two are heterogeneous urban farms and the remaining two are from homogeneous traditional Newar community from two different locations.

### 5.1.1 Urban farm in Saligram Bal Griha: an initiative to overcome food insecurity



Figure 5.1 Saligram Bal Griha Urban farm



The urban farm belongs to Saligram Bal Griha. Saligram Bal Griha is an orphanage officially established in 2001. It is promoted by the 'Help for Children Beilngries (HCB)', Kathmandu that is dedicated to social service and education for orphans. Both the orphanage and urban farm is located in Lubhu VDC at the outskirts of the Lubhu traditional core settlement area. Lubhu is one of the satellite towns of Kathmandu. It lies 6 km northeast from Lalitpur, Patan<sup>11</sup>. The orphanage was formerly established in 1998 in Jawlakhel<sup>12</sup> in a rented house by Karl Rebele (German national) with around 30 children. But feeding these children including other staffs was a problem for them. After the official establishment of orphanage in 2001 at Lubhu, they started the projects with intention to make the organization self-reliant in long run by taking charge to help the residents find a means to support a living. As a process, they started urban farming and production of biogas to supply food and other necessary things for the orphanage. The solar heater that can be seen from the entrance in the farm gives the glimpse of sustainable practice they follow.

The urban farm is in 10 minutes walking distance from the Saligram Bal Griha. It is located in the slope land whereas; there are Paddy fields in the lower flat land of the farm. Since the primary occupation of the Lubhu residents is farming, the outer area beside the traditional core settlement area still have many farm lands. But, now there are some houses in the western and southern part of the farm. The view of Kathmandu can be seen in the north-west side of the farm and the northern part across the river is Bhaktapur<sup>13</sup>.

The urban farm is a rectangular slope land terraced to provide flat land for farming. The land is vertically divided into two halves by a narrow 2.5 meters gravel road. Wide varieties of seasonal vegetables like Cauliflower, broccoli, tomato, spinach, pea, beans, carrot, radish, chilies, onion, garlic, green leaves etcetera were seen cultivated at that time. The banana tree and seasonal flowers add variety to the cultivated garden plot. Since the urban farm is owned by the orphanage enough care has been maintained to make the farm welcoming to children. This was done by making small design intervention like providing seating space near the entrance. The seating was made attractive by making the slope roof with thatch. It gives rural look to the farm. The seating serves as a social space of the farm. The big idol of Lord Buddha adjacent to the seating provides serenity to the atmosphere. This place is also used for selling the excess vegetables to the customer that comes to the farm to get organic food. Nearby the seating space farmer Surya Prasad Ghimire and his wife has raised some rabbits and ducklings. These small ducklings were not put into bars so they can move freely in the farm. This has increased the liveliness of the farm. There are two urban farmers working in the farm Narshima Bahadur Shrestha and Surya Prasad Ghimire. Narshima is the oldest farmer in the farm. He has been working there

---

<sup>11</sup> Patan: ancient settlement area of Lalitpur municipality which is the 2nd municipality of Kathmandu district

<sup>12</sup> Jawlakhel: one of the prime location of Lalitpur municipality

<sup>13</sup> Bhaktapur: the 3rd municipality of Kathmandu district



**Figure 5.2** Saligram Bal Griha Urban farm with solar boiler in the foreground



**Figure 5.3** Saligram Bal Griha and its Urban farm



**Figure 5.4** Systematic farming practice in the slope land

<sup>13</sup> Bhaktapur: the 3rd municipality of Kathmandu district



**Figure 5.5** Sitting space for visitors and orphanage children-idol of Buddha and animals like rabbit and duck behind bars make the environment lively



**Figure 5.6** Solar panel and solar dryer-panal is used for hot water and dryer is used to dry vegetables to use in winter



**Figure 5.7** Farmers working in the farm



since the beginning of its establishment. He is a local resident while another farmer Surya migrated to the capital city along with his family few years before. Thus he and his family are given a cottage to live in the farm itself. The official working hour for the farmers is from 10:00 to 17:00. But, since Surya lives in the farm itself, he doesn't precisely follow the office work hours.

At present the organic farm has good production. With this farm the children and other staff are able to have healthy organic food all year through. This urban farm also has surplus food that is now an income to the organization by selling those surplus vegetables. The increased production is the result of systematized farming process. They have adopted renewable farming methods. They use solar heater, solar boiler, and solar drier to process the food. Bio gas for kitchen is produced from the waste. Rain water harvesting is also done. The farmers and staff are also educated with ample knowledge about the organic farm procedure and use of renewable energy. Usually the farmers and the organization staffs have meeting once a week to identify the garden's need. With systematized farming practice that is done all year through, it encourages the children and neighbors to do farming as well as invites many visitors including farmers and non-farmers and school excursion to the farm. In a sense it has become a role model for the community.

### **Design Process and Implementation**

The farm has become a source of pride for Lubhu. Within 10 years of its operation it has brought immense change in the society. It encourages people to start practicing vegetable farming in their houses too. Because of its huge success they initiated another farming project in 2008 also nearby Saligram Bal Griha. They are currently working with Convergence Design Consultancy (CDC) in this project. Recently, they have finalized their master plan. Through this urban farm they wanted to set a model to encourage people to incorporate sustainable organic farming.

However, the farm has gone through many changes since its time of establishment. With every change of the care taker in the Bal Griha, the administration has also changed and sometimes the farmers have also changed. Narshima recalls that the farm used to have many different fruit trees before but one of the care takers cut that off because he thought the vegetable production was not good because of that, since the nutrient of the soil was taken by those trees.

### **Funding and Support**

The farm is supported by Saligram Bal Griha. All the expenses regarding farming are carried on by the organization itself. Each of the farmers is paid NRs. 4600 each month. The interested children of the orphanage also helps the farmers if they are free.

### 5.1.2 Urban farm in Pulchowk Engineering College: design initiative to bring multi-cultural people together



**Figure 5.8** Urban farm Pulchowk Engineering College

a. Aerial view of staff residential unit and the hostels

b. Perspective view of staff residential units with farming at their front

The Urban farm is a part of teacher's quarter and Student's hostel that is under administration of Pulchowk Engineering College. It is located in Pulchowk under Lalitpur municipality. The official name of Pulchowk Engineering College is 'Institute of Engineering' but since it is located in Pulchowk, the location offers its name to the campus itself.





**Figure 5.9** Staff working in his field



**Figure 5.10** An old woman collecting food from her urban farm



**Figure 5.11** Food kept for drying in the sun





**Figure 5.12** Ladies celebrating Holi in Teacher's Quarter ground



**Figure 5.13** Fun gathering in Girls Hostel



**Figure 5.14** Hostel girls and staff gathering for Christmas celebration

### **Pulchowk Engineering College: a brief overview**

Pulchowk Engineering College was established in 1972. The campus spans over fifty acres of land. It consists of seven main academic blocks and several others residential buildings like boys and girls hostels, staff and teacher's quarters. The quarters and urban farms were annexed later in 1990. Since it is the only government engineering college in the country there are students and teachers coming from all over the country that results in a grand ethnic pool.

### **Tour of the farm**

The farming is done in staff residential unit and the hostels. There are 30 individual residential units for the teacher quarters. The staff residential unit can house 30 families while the boys and girls hostels accommodate 400 and 56 students respectively.

Each teacher quarters are given separate green space in the front and back of their residential units. The front space is provided for gardening of flowering plants while the back space is for farming. On the other hand, the hostel units are provided with big plot of land adjacent to hostel building where the hostel staffs and interested students can plant vegetables. The campus premise is separated from residential neighborhood opposite to the road with a big concrete wall.

At present, these staff units have ten multi ethnic groups in thirty residential units including Newar, Mishra, Mandal, Nayar, Chaudhary, Chhetri, Bahun, Magar, Gurung, Pakhrin. Almost all the houses have planted seasonal flowers and vegetables in the house. Diversity in plantation was noticed during field study. It can be because of different ethnicity that has different cultures and different food habits. During field study many activities were taking place in the farm area. The field study was done during public holiday so there were many staffs in the field. Some people were also drying grains and vegetables in the sun, some were putting oil in their babies' body, others ploughing their field, tolling around, watering their plants, getting water from the tap or just reading newspaper in the sun. Although all these activities were done at the individual level nevertheless there was good communication between the staffs because they were constantly communicating with each other and also exchanging vegetables. Also the common open space that is to be shared by eight residential units has been encouraging the staff to organize community programs, celebrate festivals like Shivaratri, Holi. This has increased community life in the quarters. The staffs take part in community activities like cleaning common tap, cleaning their surroundings, getting rid of unnecessary bushes. It is also everyday space for their children to play.

The lively environment in the quarter that is contributed by the urban farms and common open space has also encouraged the hostel employees to also start doing urban farming. Since urban farm provides a platform to mingle the employees and the students, they

have been constantly meeting each other. The involvement in the farm has also been very active. Thus, it has brought changes in the hostel environment too and people are more concerned about each other now.

Each of the urban farms of the quarter has different characteristic that they bestow unique outlook to the atmosphere. There are some food and vegetables planted that are consumed or planted by particular ethnicity. Because of the extreme diversity in the teacher's quarter each of the farms has different characteristics.

### **Design process and Intervention**

The whole campus is divided into two blocks by a road that goes to Patan core settlement area. One of the blocks has administrative unit and almost all the academic block beside Civil and Mechanical departments whereas, the other corner of the block has mainly the sports and residential units. Although, located in the prime location of the city the campus has plenty of green spaces as compared to its locality. Thus, it has focused its attention to put extra effort in the design of the campus, its outdoor space and residential unit namely, teacher quarters and student hostel to be more ethnic friendly. It has also induced utilization of those green spaces and provided quality outdoor green space to the students. As a result, each department has their own outdoor space. The administrative block that is the heart of whole institution serves as the central common open space where students from all departments can gather during special occasions. Other open spaces for sports are also provided to the students. Special attention is also given to increase homely atmosphere by providing farming space to the residential unit of the campus especially, the teacher quarter and hostel blocks. Building design intervention has also been implemented for more interaction between the students in hostel units. Both the hostels are design with internal courtyard system planning. The reason for such design consideration was to encourage maximum interaction among students and teachers.

### **Funding and support**

The individual farms and hostel farm are the property of the resident itself and thus they are liable to take care of it. But for the management of water in the farm and cleanliness of the green spaces in the campus premises are the responsibilities of the campus administration.



### 5.1.3 Urban farm in Sankhamul: a place to recreate



**Figure 5.15** Urban farm in Sankhamul

The urban farm in Sankhamul lies in Lalitpur municipality along the bank of river Bagmati. The other side of the river is Kathmandu municipality. Lalitpur municipality is the second most urbanized municipality of the valley after Kathmandu municipality. Therefore, most of the farm land in Lalitpur municipality and almost all farm land in Kathmandu municipality are turned to compact buildings. Nevertheless, there are still some farmers in Sankhamul who want to practice farming as their traditional occupation.

#### **Reflection from the Past**

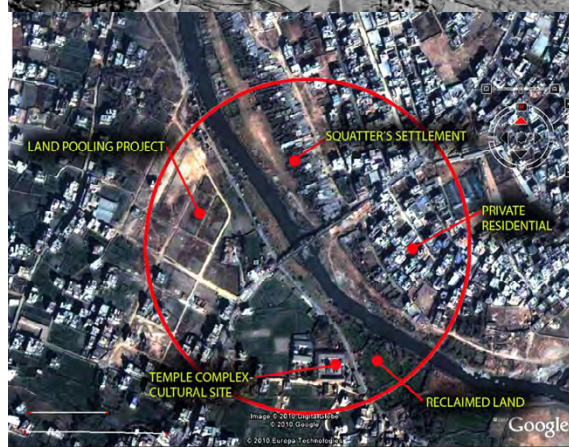
The whole area of Shankhamul used to be a farmland before. Farming was done by the traditional farmers who owned those farm lands from generations. The periphery around Sankhamul used to be agriculture land, both in Kathmandu and Lalitpur municipality that benefited from fertile soil and water from the river adjacent to the farm land. Newar's-the traditional farmers used to farm in the area and live near the Patan core settlement area. But with rapid urbanization now, most of the agriculture land in the location is rapidly turning into concrete jungle.

The area is not the official junction route for the two municipalities but this route is widely used before and now for the short cut route for people to pass through two municipalities. The purpose to make this bridge before was for the easy access of the farmers between two municipalities who own the farm land in both municipalities. Now a day's motor cy-

**Figure 5.16** Old picture of Sankhamul area showing farm land, bridge



**Figure 5.17** Recent picture of Sankhamul with farm land rapidly converted into housing blocks



**Figure 5.18** Group of women doing farming together



**Figure 5.19** Women selling the vegetables produced from her adjacent farm





clists and people take this as their shortcut to go through Lalitpur and Kathmandu municipality.

### Overview of the farm

There are houses in the eastern and western side of the farm, the farm land in the southern side are plotted to build new houses while in the northern side there is a traditional *ghat* (cremation place) along the river. The urban farm land in Sankhamul belongs to traditional farmers who have been doing farming as a profession since generations. There are still some farmers who want to continue their tradition as farmers as their main occupation. However, they have changed the farming practices according to the current need. Previously they used to grow cereal crop but now they are more attracted to vegetables farming because of the shortage of water in the farm land and in addition vegetable farming provides more income to them. The size of their farm land varies from 127.5 square meters to 509 square meters and almost all the farmers do individual farming.

However, eight families were farming together. These families own these farm lands since generations. They also used to farm individually before when farming was still their profession. But now these families have switched to other non-farming professions. The young male members of these families choose other non-farming activity as their profession while the old male members of the family are old enough to come to the farm. That is why almost all of these families have sold most of their farm land to build new modern house adjacent to the farm land or invest the money in other profitable businesses. Most of the urban farmers kept these lands under the pressure of their parents because the old parents associate memories in the farm lands. They have the obliged compulsion to preserve and protect their farm land and thus their culture.

Currently, farming is being done by the female member of the family. Although these women are from same ethnic group they were from different location in the neighborhood. They do farming to utilize their free time; to get in contact with other farmers and for vegetable supply to their family. They don't sell vegetables. Some of the women have done farming before their marriage but many had not done any farming before marriage. Initially their in-laws were farmers thus they developed interest in farming and now even though they have enough money to buy vegetables they enjoy farming. Usually these women go to urban farm twice a week. They usually go together after arranging their meeting venue via telephone. Mostly they go to urban farm after their children have gone to school and stay there shortly before their children's are back from school. While in the farm each of these ladies help each other water their plants, get rid of un-necessary weeds, gossip about their neighbors, friends and family. They also picnic in between. Their age varies usually from 30 to 55.



### **Design process and implementation**

There is not much design intervention in the site. The farmer utilizes the maximum land possible to farm. Even though they don't do large scale farming they can have seasonal organic vegetables. This way they are saving money rather than spending in purchasing everyday vegetable needs. It has also become a source of income for many farmers as they can sell those vegetables in the evening vegetable market adjacent to the main street.

#### **Problems**

Although the farmers are still the Newar descendants it is not necessary that the houses built in or nearby the farms are owned by Newars. There is mixture of multi-ethnic people in the location who share different profession, social status and ideology. So, it is possible that it will invite conflict. It was also seen that there were houses in between the farm land that doesn't have proper access to the main road. Also, during the field study it was noticed that the road adjacent to the farm land has also been used extensively by motor bikes. The farmers were complaining that the dust from the sandy road is hampering the proper growth of their vegetables. The problem faced by Kathmandu people regarding water crisis is also faced by the farmer in the site. Although they have river adjacent to their farm they said they don't take water from the river as the river has turned to the sewage disposal line to the city people. But due to acute shortage nowadays, they use water from the sewage and sometimes from Bagmati River nearby. But they said there has not been any help from the government.

#### 5.1.4 Urban farm in Thapathali: farming in the riverbed



Figure 5.20 Rapid development of Thapathali Area from 1965 to 2010



The urban farm land in Thapathali also lies in the flood plain of the river Bagmati in Lalitpur municipality. Thapathali is one of the busiest urban centers of Kathmandu. It is the prime junction of Kathmandu and Lalitpur municipality. It houses old traditional temples, many multiplexes, teaching institutes, hospitals, the traffic police office, government and non-government organizations and many institutions. Therefore the land price of this area is very high. This results in the rapid conversion of the traditional farm lands into concrete buildings. The houses are usually three to four stories high, which they let in rent, so informal renting is the alternative source of income for the farmers living in the locality. At present there is not any farming activities going on in these areas besides the farming done at the banks of the river Bagmati. This land is new land in a sense that it is formed after the great flood in 1994 when the river Bagmati changed its route living behind the vacant plot. This is the only land, spared from modern development because no any infrastructure development is possible in the flood plain.

The farm land can be reached through a wide gravel road in five minutes walking distance from the main Thapathali junction. The road starts from the left side of the main Lalitpur-Kathmandu road that passes beneath the Bagmati Bridge. The road also served as a demarcation point to separate public land from the flood plain. This road is also a short-cut route mostly taken by private car holders and motorcyclists who want to avoid traffic jam to go to Teku and Kalanki (the border to go outside Kathmandu valley). An Evening vegetable market can be seen at the mouth of the junction below the bridge towards the farm. There is a vacant land in the east and west side of the farm that has been turned into a dumping site while the flood plain across the other side of river in Kathmandu municipality is occupied by the slums. The farmers who farm in the flood plain live across the road. Currently there are twenty-seven farmers farming in the farm. The entire farmers are the local inhabitants of the area from Newar descendent mainly Tandukar and Maharjan.

### **Development of the farm and measures to protect the farm land**

Farming in the flood plain was started in 1995. The new land was divided as per the width of the farmers they legally owned before. Therefore the size of the farm varies differently from 96 square meters to 1018 square meters.

Originally the farmers had invested a lot of time and energy to make the barren flood plains fertile; they had started to depict their ownership on those lands. Thus, they started building houses or selling their own traditional farm lands more rapidly while cultivating the flood plain farm land. Presently, their own traditional farm land is all converted to the concrete buildings. The present scenario is that the farmers rely only on the flood plain farm land for farming. But now there are many individuals, government, and non-government organization to claim the land. The non-government organization-UN (United Na-



**Figure 5.21** Urban farm in Thapathali



**Figure 5.22** Fencing around the farm to protect from vandalism by Ganesh Yuba Club



**Figure 5.23** Women from Thapathali urban farm selling vegetables in evening near-by their farm

tion) wants to build a park called 'UN Park' and has started planting series of trees along the river to protect the area from flood. While the Government wants to build a memorial park called "Republic Memorial". Therefore, there is a conflict between the ownership of the land.

The farmers want to protect the illegal farm land from other intervention so they have formed a committee called 'Ganesh Yuba Club'. Their main aim has been to work as activists to legalize the farm land in their own name. But besides that they have done some development work, like putting fences around the farm land. They also installed common taps for people to get water for drinking and washing. This club also helped the farmers to market their vegetables, buy fertilizers and help farmers who seek expert assistance at times. Beside their strong place attachment to save the farm land their other reason to save the land was stewardship. They argue that because of their farm land the site is green and maintained whereas the surrounding of the farm is dirty and messy.

### **Farming**

The farmers have been able to grow vegetables all year round due to the high quality soil in their farmland. Since, farming is done as a profession; most of the farmers cultivate vegetables that generate more income like green leaves, carrots, and cauliflower etcetera. They do not plant cereals and vegetables that need lot of water, like for example, potatoes, rice or wheat. The cultivation is intensive in character. Waste water irrigation with seven outlet waste water drainage points are utilized for irrigating the vegetables. The farmers also utilize sewer water for farming. The farmers said that due to nutritional value of the waste water the yield is very good. The farmers said although the yield is very good, the dust coming from the gravel road during the dry season spoils the vegetables.



## **5.2 Results from interviews and observations**

In this section, the results of the field studies are presented. The results are an outcome of intensive interviews and field observations. The results section is divided into two parts. The first part of the results is the general overview of the study locations. It consist mostly the narrative story of the urban farmers themselves. This part put urban farming into two continuums. The first part looks at potential of urban farming as a means to alleviate food insecurity and the second part look urban farm from public space perspective. The second part of the result is the detailed overview of the study locations. This second part is the outcome of researcher detailed finding during the field trip. The findings were questioned to farmers and the authorized bodies to verify.

### **5.2.1 Results from the general overview of the study locations**

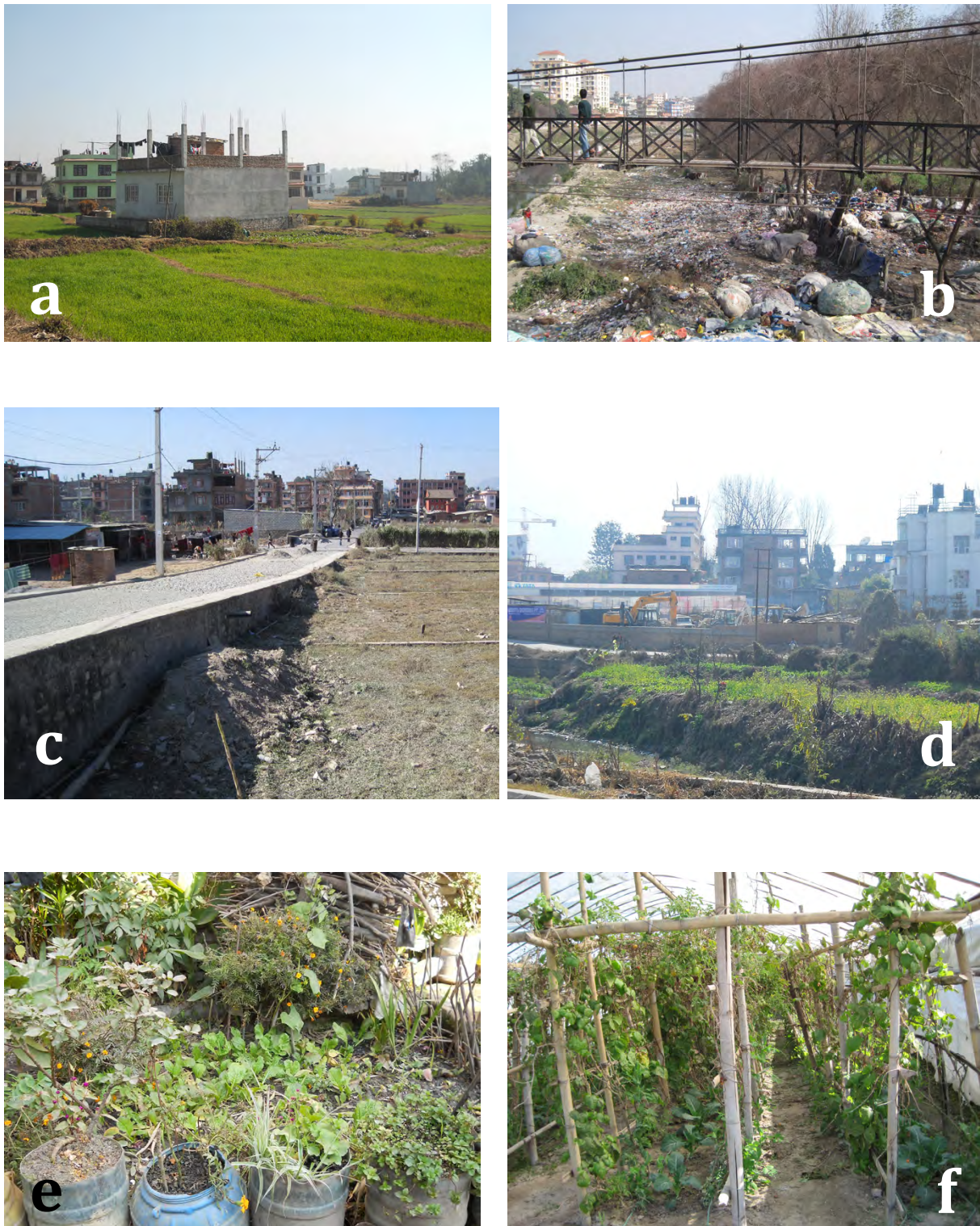
The results from the general overview of the study locations consists mostly the narrative story of the urban farmers themselves. This part describe the farmers attitudes towards the farm; and problems and benefits they find in their farms. This section is further divided into two other sub sections. The first subsection looks at the basic function of urban farming in Kathmandu. It explores the reasons for most of the urban farmers to start doing urban farming. It also talks about the innovative ideas the urban farmers of Kathmandu are following. The second part looks urban farm from public space perspective. It found urban farm was an everyday place for many farmers that provides opportunities to interact with other, it was also a place to fulfill hobby, a place used as an escape and for some a lifelong story related with their life and families.

#### **5.2.1.1 Urban farming as a means to alleviate food insecurity**

During the field study, it was noticed that for most of the people in Kathmandu, urban farming represents food since most of the urban farming was done to overcome problem arising from food insecurities. During the city trip in Kathmandu it was noticed that shops and market places were in every node and everywhere in the street. It is easy for people having money to go to the nearby market and buy fresh food and vegetables. But there were also places where people were so poor that they could not afford to buy food. The slums and Squatters are some examples of such a case. Since the riverbank is a no man's land, the squatter settlements are found especially along those riverbank areas. It was there that people have taken their own initiative to grow the food for the purpose of food security. It was also a common phenomenon to see people doing farming in the unused private land nearby their houses; farming along the road corridor is also not a new phenomenon in Kathmandu. The owner of the land also let other farmers work in their



### **Collages of negative development and positive initiatives**

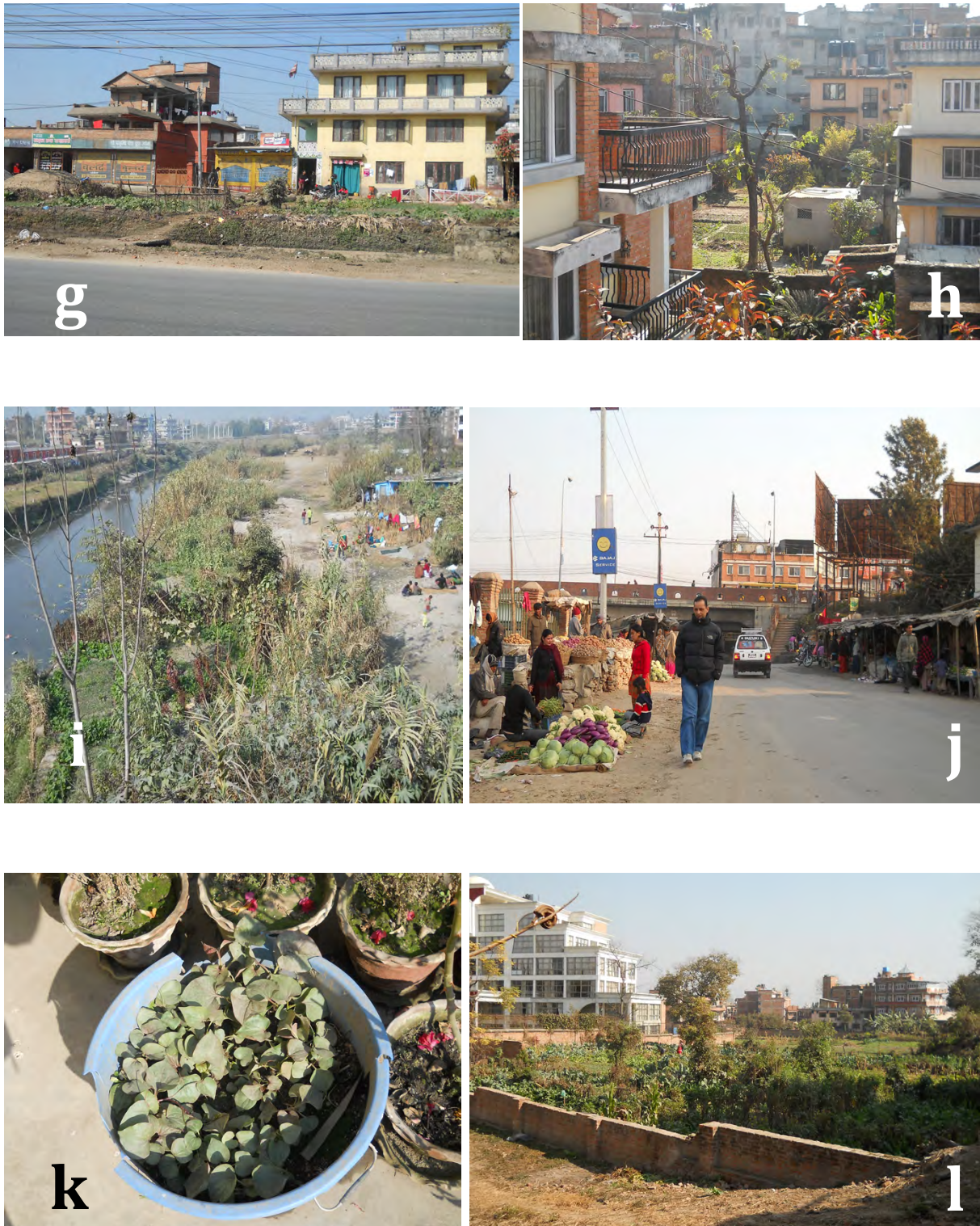


**Figure 5.24** Collages of negative development and positive initiatives

- a) House built in the former farm land
- b) Garbage thrown in the river bank but in the background farming initiation seen
- c) farm land plotted and roads being build in former farm land
- d) farming innitiative in the river bank that was formar garbage disposal spot like other
- e) Vegatables grown in plastic pot to overcome food insecurity
- f) systematic farming practices



## Collages of negative development and positive initiatives



**Figure 5.24** Collages of negative development and positive initiatives

g) people planting vegetables in road corridor

h) farming between building in unused vacant land

i) Squatter settlement near Sankhamul Urban farm: innitated urban farm in the river bank

j) Evening market at two side of the road near Thapathali Urban farm

k) Vegatables grown in earthen pot in the roof

l) One of the reknowned university newly build in fertile farm land

land either in a lease or free of cost because then the farmers will look after their vacant land which otherwise would have turned into a dumping site. There is also an initiation towards kitchen garden and roof farming. Migrants were usually seen to do urban farming to resolve food insecurity problem.

Of all the four field study locations namely Saligram Bal Griha, Thapathali, Pulchowk College and Sankhamul, the primary purpose of establishment of the urban farming was to produce food. Although, at present, the purpose for Pulchowk staff quarter is to bring the diverse community together, and some women in Sankhamul do farming to kill their free time but there are still many farmers in that locations who do farming either as a profession or as compulsion to overcome food insecurity.

Among the studied urban farms, Saligram Bal Griha was the most organized urban farm that had a sole purpose of feeding sixty people: 40 children and 20 staffs. The present caretaker of the organization Soviet Ratna Tuladhar said,

*"Since we started doing urban farming, our organization doesn't have to worry how we are going to feed these children anymore. I think what Karl did to make this organization self-sustain is the best solution ever. And now our methods are getting more recognition. Individuals and organizations from other places are coming to us to know about the process to implement urban farm. This has encouraged me a lot. Therefore, last year I took fifteen days training in Baneshwor in 'Nepal Parma culture Group (NPG)'. The training changed me completely. I didn't know even the lawn has so many varieties of grass. I have now initiated doing small vegetable farming in front of the organization building to set a model for visitors and remind children to be self-sufficient for themselves too."*

At present the farm has good production with a surplus of food that is now an income to the organization because they sell those surplus vegetables. One of the farmers of the organization Surya Prasad Ghimire (44 years) said,

*"Before when we had just started having surplus vegetables, Soviet sir used to take those vegetables to hotels and sell them. But now he doesn't have to take them. People from the hotel call the organization if they need vegetables and they also send their own worker to get the vegetables. Now-a-days people from the neighborhood and other people who know about our farm come to our farm itself to buy vegetables. At times when some of the vegetables price is very high in the market many people come here because we sell vegetable in constant rate all year through. But, we always make sure that only the surplus vegetables are sold."*



It has been 12 years now since they started doing urban farming, thus it is obvious that they have systematized the farming process. They have adopted renewable ways to farm by installing a solar heater, a bio-gas plant and rain water harvesting while the farmers were also educated with ample knowledge about the organic farming procedure. Therefore, with the urban farm the children and other staff members were able to have healthy organic food all year round.

In the other study location Thapathali, the indigenous people were doing farming in the flood plain of the river bank because they had already sold their farm land and now they are using their farming skill on public land without paying taxes to any institution. Their major concern was food security. The farm supplied most of the vegetable demands of the farmer's family. They were also making money by selling vegetables on the nearby market. These vegetables were often sold for a lower price than the normal market price because of the accessibility of the nearby market. Since, much of the money for buying vegetables has been saved because of the farm; the farmers' economic standard has improved. When I visited the farm, two women, Pun Maya Tandukar (75 years) and Maiya Tandukar (42 years) were working together on the farm. They were mother and daughter. In Nepal, it is not common to see married women helping their parents with work. So, when I expressed my curiosity as to why she was helping her mother, Maiya explained,



**Figure 5.25** Maiya helping her mother in their farm



*"My mother cannot stay at home all day. And since she was doing farming from her childhood she still likes to spend her time on then farm. But because my brother and his wife go to office everyday my mother has to work alone on the farm. In my case, my husband has a small shop and we don't own any farm, therefore maa (mom) gave a small plot to me so that I can come to the farm. I can now supply some vegetables to my family and also help my mother in farming. I also sell excess vegetables in my shop. My mother also gives her excess vegetable for me to sell and I'll give the money after I sell her vegetables."*

In that way Maiya can also see her mother and as an additional benefit she can also have fresh vegetables for her family. Now she can also sell both her mom's and her own vegetables to earn extra money.

One of the farmers of Thapathali Urban farm, Narayan Das Dangol said,

*"I've done many other types of work before doing farming. But I was not competent enough to make a good income. So, I thought of doing my traditional family profession at which I was quite confident. But because I have*



Figure 5.26 Narayan Das in his farm



*already sold my agriculture land, I have to rely on this flood plain. The soil quality of this flood plain is very good that is why I cultivate this farm three seasons per year. There is much profit in green vegetables so I cultivate them more and thus I'm able to generate more income."*

For staff members in Pulchowk Hostel, farming is a source to save their income since they don't have to spend money in buying vegetables. One of the employees in Pulchowk Hostel Bhakta Acharya (45 years) said,



**Figure 5.27** Bhakta farming with her colleague her daughter is standing by her side

*"I live with my family in one of the quarters here. My family has four children including my husband and me. Both of us work for the hostel. We are paid NRs. 7000 each per month. But our salary isn't enough to look after the family and the children. All my children go to school; most of our income is spent in their tuition fee and their books. So, we've started doing urban farming at the back of our building. This has made a huge difference in our lives. Previously 50 percent of our income was spent in food and it was very difficult for us to manage the house. Now, I don't say we are self-sufficient but we are in a much better situation"*



There are other employees as well who share the same kind of story. The employees of the hostel kitchen also do farming to provide vegetable supplies for lunch and dinner for the students in the hostel. They said if they have to buy vegetables to cook everyday then they could not manage to sell the food for such low price (p.s: The price for food is NRs. 25 per meal). One of the employees Juna Thapa (40 years) doesn't live in the quarter. She said,

*"The place where I live doesn't have enough land to farm. And if there was, I think house owners would do farming for themselves. So, I do farming in the back of the hostel with employees from the hostel kitchen. My reason to do farming is not only for food but also for health. See farming is good exercise too."*

Some of the staff members also sell their vegetables in the shop on the campus although that is not legally allowed.

In case of Sankhamul, it was seen that there were some farmers who were commercially doing farming to sell vegetable to the nearby evening vegetables market. These farmers were traditionally involved in that occupation. But there were also farmers who were doing farming to produce healthy organic food for their family. The people from Shankhamul and Pulchowk were uncertain about the quality of food they get from the market.

### **5.2.1.2 Urban farm as a public space**

During the field study, it was seen that urban farm also serves the purpose of public space in addition to food security. Especially in places where there is a heterogeneous community urban farming tends to act as a good mediator to facilitate community interaction. In this part I am going to look at different roles of urban farm and its relation to public space. This part is also based in the urban farmers own narratives.

#### **5.2.1.2.1 Urban farm as an everyday place**

In the whole field study area, it was noticed that urban farms were everyday place for most of the farmers. For many, going to the farm was a habit. It is where they feel comfortable and at ease. To most of the farmers, the farm is a pleasant place either to recover from their past or to kill free time. Pun Maya Tandukar (75 years) from Thapathali said,

*"My day is not complete unless I go to the farm once a day. I've been doing farming since I was very young. My parent used to farm and my husband was also a farmer. Doing farming was so much fun before. All your relatives were there in the farm talking, singing, and chatting were all part of farming. But nowadays nobody likes farming. You can hardly see children in a farm. Even my son and grandson don't do farming."*

One of the old farmers in Pulchowk Quarter spent all his life doing farming. While he was young, he did agricultural studies. He was so interested in the subject that he chose farming as his profession and never opted for official work. Even after marriage, his wife went to work in an office, but he was still a farmer and looked after his children. Now his daughter-in law is so much interested in farming that she quit her job to give continuity to his work. He is very happy.

One of the employees from the hostel Shova Bhatta (39 years) said,

*"This farming has brought new life to the hostel. When we first started the hostel, everybody was willing to contribute to make this hostel, home. But, it gradually lost its charm. The situation gradually got worse to the extent that there were many students that never bother to talk with us even when we initiated the talk. So, Mathura maam (Hostel warden) proposed doing farming in the hostel because she experienced the positive atmosphere in the quarter. I think it has changed the atmosphere again. Now the students come to the reception only to talk with us. We discuss about plants and other stuff. I'm glad that the old atmosphere is back again..."*

The urban farm has motivated students to celebrate different festival actively in the hostel that is either common or predominantly followed by only a particular ethnic group. They also invite the employees to participate. The students also initiate to cook food sometimes. Their enthusiasm rises when they cook the vegetables they grow. On the one hand, those students are able to eat fresh nutritious food, whereas on the other hand, they are able to share the knowledge and information about various plants and their origin. The employees also exchange the vegetables they grow, look after each other's plants, talk about problems with the plants and seek solutions together.

For the farmers of Saligram Balgriha, Surya Prasad Ghimire (44 years) and Narshima Bahadur Shrestha (60 years), the urban farm is their everyday place. Surya is from outside the valley so he lives with his family in the cottage on the farm. Surya said,

*"My job on the urban farm starts only from 10:00 in the morning and it ends at 17:00. Uncle (Narshima) only comes at 10:00. But because I live on the farm I don't follow a fixed working routine. I work all the time. Early in the morning when I wake up I like to stroll around farm for few minutes..."*

And for Narshima, farming is what he did all his life. He recalls,

*"I started farming not for fun. My father died when I was fourteen. After that all the household responsibilities came to my head. Farming was my father's profession so I also started doing that because I knew nothing more*

*than that. But after my children grew up they didn't want to do farming so we sold some farm land and built a house on the remaining land. Now, I don't have my own farm land but because I've been doing farming since long, I joined this organization to utilize my knowledge and to also kill my free time."*

#### **5.2.1.2.2 Encourage opportunities for interaction**

Urban farm provide multiple opportunities for people to interact. In almost all the study areas, there were interactions with each other in many ways. It was by either establishing some relation with each other, or going to each other's place in some festivals or finding a way out to meet their parents or forming a community to protect their farm land. One of the farmers in Lubhu, Surya said,

*"I come to the capital city with my family. I don't have any relatives here; all my relatives are in the village. But, uncle is native of this place. So he invites me and my family for dinner at his place in major occasion, feast and festivals."*

Because they have been so close due to farming, he calls Narshima uncle and his children also greet him as their relative. Urban farm also helps Surya to know new people. People from the neighborhood and from other villages nearby come to meet him to seek solutions for problems related to urban organic farming. Some schools also bring their students to the farm as part of the excursion.

In case of Pulchowk Campus, the hostel and the teachers' quarter are filled with multiethnic people. They live temporarily in the quarter so there are many people moving in and out. This results in less care for the neighbor. Therefore the campus administration deliberately provides urban farm area and common open space to facilitate interaction, meet other people, interact with them, discuss about their plant, work and progress. Since, everybody in the quarters is doing farming; they have developed strong community bonding. They take part in some festivals like Holi and Shivaratri.

In one of the study location Sankhamul, there were eight women working together. These women are from the same ethnicity but they are not relatives. The farmlands were their ancestral farmlands, which have been passed on to them through generations. Previously their ancestors used to farm individually. But now because they have sold most of their farmland and only small portions of land are remaining with each of them. In addition, the male member of the family does other non-agriculture activity besides farming. Previously these women used to do farming individually. During farming they know each other



in very less time. Since their purpose to supply fresh healthy food to their family and to utilize their free time was same they decided to do farming together five years back. In that way they can take maximum benefits from each other. During indirect interview they were excited to talk about how benefitted they feel and think it was the right decision they made to do farming together. One of the farmers Sunita (47years) said,



**Figure 5.28** Group of women taking break from their farming activities while one woman was indifferent to the other women activities

*"It is good that we decided to do farming together. It is so much fun now. The workload is also reduced remarkably. If one of us waters the plant, the other two can take off the unnecessary plant growing near the vegetables while the other can peel bhogate (oranges) in between"*

In contrast, in case of Thapathali, the farmers usually don't interact during farming. But because their farm land is not their legal land they formed a club named 'Ganesh Yuba Club' to legally form a group to initiate talks with the responsible authorities to let them continue doing farming. All the farmers are the members of the club. The club also looks after issues like vandalism, restricts homeless people and drug abusers and alcoholics to enter the farm. They also look after the market distribution of the vegetables. The president of the club Narayan Das Dangol (36 years) said,

*"I think the soil here is the best soil for vegetable cultivation in Kathmandu. You can cultivate three seasons per year. Therefore we want to protect this land from being changed from farming land to some memorial park." He added, "See the other side of the river; it is so dirty and messy. This place would have turned the same if we hadn't turned it into farming area."*

#### 5.2.1.2.3 Learning from each other

One of the most important aspects of the farming was the informal setting it provides for learning. In case of Lubhu, the two farmers were from different locality. They said the farming method inside and outside Kathmandu were quite different. So, in the field, they teach and learn from each other. One of the farmers, Surya said,

*"The farming method of the farmers in Kathmandu is different from the farming method we follow in our village. Since I'm from outside valley, we had different methods of farming compared to the farmers from within the valley. Narshima taught me traditional style farming and also taught me to eat typical food 'chyapi' from his ethnicity. Now I like it very much."*

In case of Pulchowk Campus, the farming is divided into hostel and quarter area. The employees from the hostel premise farm within the hostel boundary, whereas all the employees do individual farming in their backyards. Even though each of the employees does individual farming, they talk to each other when they meet in the farm, discuss about their plant, work and progress. It has been seven years that the hostel staffs have been doing farming. They initially started doing farming as their hobby to spend free time in the evening but later it has changed to a secondary source to earn money as well.



The urban farming in the hostel has become a strong source for encouraging learning and taking care of each other. Usually the students from the hostel help the hostel employees to farm. Sita who lives within the hostel premise takes care of the plants of the other employees while they return home in the evening. Since the employees and the students are from different parts of the country with different ethnic background there were high chances to have conflicting ideas. And, because the employees have a lower social status, they hesitate to communicate with the students thus farming helps for easy conversation between the employees and the students.

#### **5.2.1.2.4 Encourage place-use meaning**

Urban farm has also become a place full of memories of the event from the past to many farmers. One of the employees from Pulchowk Campus, Sita said,

*“I’ve been doing farming since my childhood. After I got married and had my child, I didn’t have much time to farm, so farming was kept aside for some time. But, after my husband left me and took away my son I was very depressed. I had no work and all I did was mourn for my bad luck. But one of my relatives offered me a job here in the hostel and the warden encouraged me to do farming so that I can forget that traumatic event. Plants are my children now.”*

For Sita urban farming has become a place to recover from her past. She said whenever she feels desolate; she goes to her farm to alleviate her sadness.

Narshima also recall his story from an urban farm. He has been in the farm since the beginning of its establishment. He said many things have changed since the beginning of its establishment. With every care taker there is some change in the farm.

#### **5.2.1.2.5 Place of escape**

It is common for Nepalese women to stay at home while their husband and children go to work or school. For many women in Kathmandu farming is a means to escape from their usual routine work. These women regard farming as a means to divert themselves from the regular routine work. Among the employees one staff wife in the Pulchowk quarter Chini Baniya said,

*“I get bored in the house sitting alone after my children and husband go to work. So, I like to work in the garden.”*

She adds,

*"I had an operation a few days back. If I stay in the room I realize I feel more pain but if I'm in the garden with plants I forget all my pain."*

Like Chini many women in Kathmandu think the farm is a place to escape from their daily routine activities. One of the farmers in Sankhamul said,

*"I live in a joint family. We have 15 family members in a house including my in-laws and my husband, two brothers and their families. If I stay at home I've to stay all day in the kitchen cooking for them so I come to the farm to skip some house hold works."*

The case is same with Maiya in Thapathali. She comes to the farm to meet her mother and also to have some free time from her regular work.

#### 5.2.1.2.6 Hobby

The women in Sankhamul, Pulchowk Quarter and Lubhu do farming as a hobby. Even though the women in Sankhamul have enough money to buy vegetables they like to do farming just for fun, to get in contact with other farmers who are friends now. This happens due to farming. Usually these women go to the urban farm twice a week. They usually go together. They call each other via phone, fix the day, and time to go farming. While in the farm each of these ladies help each other water their plants, get rid of un-necessary weeds, gossip about their neighbors, friends and family. They also organize picnics in-between. One of the farmers among them said,

*"We are so used to seeing each other now. Even if we don't go to farm, we call each other just to say hello. We never needed big occasion to talk, we can gossip about anything and it is still very interesting. I think that is why we like each other's company."*

While for some staff in the Pulchowk quarter, farming has become their hobby so much that they skip their profession to continue farming. One of the staff's wives from the Pulchowk quarter, Nirmala Ghimiri (30 years) said,

*"I started doing farming after I got married. My father-in-law was a farmer so I developed interest in it. When he was still capable to farm, we used to have the best well maintained farm among this quarters staffs. But as he got old, our garden started getting messy. Although my husband wants to look after the farm, he is very busy with his work on the campus. This farm*

*was always a relaxing place for me. It has given me so much so, I thought I should look after the farm now.... so I left my job."*

Before I asked anything she added,

*"You may think I'm a fool to leave my job to only do farming but I'm still proud of my decision. This farm gives us food; air, refreshment and we were not able to do anything after my in-laws were unable to do so. Now I've transformed the farm to its previous form."*

In case of Lubhu, although there were mostly men doing the farming one of the farmer's wife was also helping her husband in the farming process. Even though she is not paid for her work in the farm she said she liked to farm because she has nothing to do in the afternoon after her children are gone to school. Thus her husband has given her the special responsibility to look after the animals in the farm.

### **5.2.2 Results from the detailed overview of the study locations**

The second part of the result is the detailed overview of the study locations. This part is the outcome of my own analysis of the study location. During the study trip I see sparse amount of children in the farm, also I see that farming was done by mostly by the women and some of the available land suitable for farming in the particular field study location was not utilized. This motivates me to investigate further into the matter and as consequence second part of the result develops. My field observations were questioned to farmers and the authorized bodies; that were sometime supported, explained and sometime denied by the concerned personal.

#### **5.2.2.1 Children's involvement**



**Figure 5.29** Bhakta Acharya's daughter playing in the farm

During the field study, it was observed that children were not encouraged to do farming by their parents. There seems to be a general misconception among urban people that farming is an inferior job and that being involved in farming degrades their social status. Consequently, even those parents who themselves are involved in farming, are encouraging their children to pursue a career in a non-agricultural profession, which is also believed to generate higher income. The reason for such belief could be the poor economic condition of the farmers in the country. However, it was noticed that if the young children are encouraged to farm they will at least practice farming as a hobby in their later age if not as a profession. The example for such case can be seen in Lubhu and Pulchowk campus. There are two farmers working in an urban farm of Lubhu organic farm; Narshima Shrestha and Surya Prasad Ghimire. Since, Surya is from outside the valley he has been given a house for his family in the farm itself whereas Narshima is a local inhabitant of the place so he only goes to the farm during office hour (10:00-17:00). Living on a farm and living outside of a farm has a consequence for their children preference for farming. Out of three children from both the farmers Surya's children show more affinity to the farm whereas in the case of Narshima, who has farming as a family descendent, his children are not interested in farming and are already in other profession like bank and business.

The oldest son of Surya was not seen in the farm during the field study. When asked Surya about his absence he said his son has to go to school so he couldn't find time for farming but his younger daughter and son were there on the farm; they were helping him in farming. His small son (7 years) likes to water plants. He knows exactly when the plant germinates from the seed in both winter and summer season. His daughter is especially concerned with the cleanliness of the farm area. Whereas in case of Narshima, he has been doing farming since the age of fourteen after his father died but he is worried that his family tradition will soon discontinue once he stops farming. This worries him because now it seems like he will not be able to pass the family tradition to the next generation. Thus, he is interested in keeping his traditional farming skills of Kathmandu valley alive by teaching his tricks and tips to Surya. In Bal Griha, those orphan children who are interested in farming are encouraged to farm but then there is also a case of Child Labor act in Nepal. It is a crime in Nepal to make children work below 16 years. So Bal Griha is afraid to ask children to work on the urban farm, as they are afraid of exploitation. Children over 16 go to urban farm with some machinery instrument to plough the field.

In Pulchowk Campus, the farming situation for the younger generation is to some extent the same like for Surya's oldest son. Most of the teachers and staff living in the Quarter area do urban farming. Urban farming in that place has become a source of community formation where among the 30 houses variety of multi ethnic (12 at present) groups can interact.



Since they farm in the backyard of the house every child in the quarter has the opportunity to farm and see plant grow in front of their eyes. So, in their early years, most of the children were interested in farming. But at the later years because of the education system, the education system in Nepal is from 9:00 to 17:00, and because parents want their children to focus on their studies and in their assignments children lose their interest in farming and only continue sometime in weekend as their hobby. However, in the Pulchowk hostel, the students in the hostel who are interested in farming help the staff with the farming. Whereas in the case of Shankhamul; the urban farmlands and the houses were at distant. Thus, the women usually go to urban farm only after their children were gone to school and stay there until shortly before their children are back. Some of the women had never done farming before their marriage, but they started farming after getting married because their in-laws were involved in it.

In Thapathali, no children come to the urban farmland. There was one child during the whole field trip that came to the farming area to meet his grand mom to ask for food. He was in his school uniform and when asked if he likes doing farming he said no because his parents, who are both job-holders, do not like him going to the farm.

Children who have urban farm as their everyday landscape setting, shows more affinity towards the farm in their early childhood and later transfer that to be their hobby but there was no such cases where they said they want to be a farmer in future.

#### **5.2.2.2 Traditional urban farmers especially male farmers are tending to abandon farming profession while women were seen to replace them**

During the field study, it was seen that in most of the urban farm areas (Pulchowk, Sankhamul, Lubhu and Thapathali) there were either a higher number of women and old people or to some extent there was some role of women in the farming because men were involved in other alternative occupations. The farming in Sankhamul is usually done by the female members of the family whereas the male members are busy doing non agriculture business. It is also common for Nepalese woman to stay at home while their husband and children go to work or school. Thus urban farming has become a platform for social interaction among women and to also utilize their free time.

In case of Pulchowk Campus the farming is divided into hostel and quarter area. All the employees do individual farming. The employees from the hostel premise farm within the hostel boundary whereas all the other employees have their own farming area in the place they live. Even though each of the employees does individual farming they talk to each other when they meet in the farm area, discuss about their plant, work and progress.

Although the primary job of the employees in the hostel is security guard, urban farming has become their second occupation now. With their first job hostel employees earn NRs. 7000. Since, the hostel employees also sell surplus food so they have additional income as well.

It has been seven years that employees have been doing farming in Pulchowk hostel as their hobby to spend free time in the evening. For another staff Bhakta Acharya, she lives with her family and because her salary and her husband's salary is not enough to look after her family and children. So, she is doing urban farming as a source to overcome food insecurity.

In case of Sankhamul, although there are some few square meters of land for farming many of the plots are individually farmed. But there are eight families that farm together. Farming is usually done by the female members of the family whereas the male members are busy doing non-agricultural business. Although these women are from the same ethnic group they are from different locations in the neighborhood. They do farming for family vegetable and rice supply. They don't sell vegetables. Some of the women have done farming before their marriage but many had not done any farming before marriage. But before their in-laws were farmers thus they were interested in farming after marriage and now even though they have enough money to buy vegetables they like to do farming just for fun, to get in contact with other farmers whom are now friends.

While in case of Thapathali, even though the farmers hardly communicate with each other in the farm there were cases seen where the daughter of the family who is already married came to help her mother in the farm because her mother was too old enough to do farming and her brother has already changed his profession.

#### **5.2.2.3 Some administrations do not want their staffs to farm**

On Pulchowk Campus the administration does not promote employees living in the quarters to do additional farming besides the farming in the small plot of land adjacent to their house separated for kitchen gardening. When I asked the administration for the reason they said,

*"Since urban farm land and campus is very near, staff used to quit working in the campus administration and hurriedly go to the farm land so there was no one in the office during campus hours thus the administration was forced to lay brick in the fertile land."*

### **5.3 Conclusion**

In this chapter I gave overview of four field study locations. The narratives from interviews and observations were then decoded into various sections and subsections. The interviews and observations were constantly checked with the list of concept formed from the theoretical background chapter 2. For that results were first divided into general overview and then to detailed overview. In general overview, urban farming in Kathmandu was analyzed for two of its prominent role: Food security and Public space. The interesting thing found during the interviews and observations analysis was that urban farmers in Kathmandu used their farm for other purposes as well. Thus it popped new concepts beside mentioned in the theoretical framework chapter.







# chapter 6

## Community life though farming





From the field observations and result sections it was noticed that most of the urban farmers from both the homogeneous and heterogeneous communities appreciate their farm and enjoy working in it. These farming communities have subtle differences in the reason to farm, the level of communication, and place attachment. However, each of the farmers from both the homogeneous and heterogeneous communities emphasized the positive impact of their farm on their everyday life. In this chapter, I will discuss those findings to verify my research questions. For that I divided this chapter into five parts. In the first part, I talked about the primary reasons for urban farmers of Kathmandu to do urban farming. In this part the primary reasons was focused on food security. The second part looks at the community aspect of urban farming. It talks about the community benefits obtained through urban farming. In this part, list of concept formed during theoretical exploration is checked to see if those concepts can also work in case of urban farming in Kathmandu. The third part looks at the influence of urban farming on day to day life of urban farmers. The influences are checked through new concept namely exposure, behaviour and selection. The fourth part looks into the result analysis and further explores different purposes of farming in heterogeneous and homogeneous communities. The last section looks at the various reasons that cause the decline in urban farming practices in Kathmandu. The theoretical framework established in chapter two was checked with results from previous chapter for discussion.

## **6.1 The primary reasons to do urban farming in Kathmandu**

After the field observations, interviews and result analysis I am quite convinced that the well-being of Kathmandu is very much dependent on food security. It could be observed that, in Kathmandu the primary reason for both the homogeneous and heterogeneous urban farming communities' to practice farming was to overcome problems related to food. An urban farm was seen to serve as a resource for low-income communities, immigrants, and economically marginalized and deprived families. Appeaning Addo (2010) also mentioned that 37 percent food production done within Kathmandu valley was to meet the daily household need.

It is already discussed in theory chapter, that the poor have generally fewer resources than the more privileged one. These people are the one that lack socially supported strong community that results in less social cohesion. Thus they generate a culture of isolation and a sense of separateness from the relatively more prosperous part of the city (Hickman et al., 2008, p. 116). In case of Kathmandu, the poor people were still struggling to fulfill their basic needs, like, to have food. Bryld (2003) also mentioned that these people rarely have access to farming plots big enough to supply the whole family with food. During field trip



it was seen that these poor people were forming slums and squatter settlements by occupying river banks, road corridors and vacant lands nearby their houses for farming. From results section it can be said that for them doing farming on such unused land, river banks, road corridor, roof tops is a valuable asset in building up their sense of well-being (Cattell et al., 2008, p. 546), since it serves as a vital side earning for most of them. Therefore it can be said that until and unless these people have access to food and have a reliable source to supply their family needs every day, they will hardly have time to think about community. My statement can be further bolstered by putting forward arguments from Jacobs (2011) who says, an experiential quality of the landscape is more desired in the western society where people do not have to think 'how to get something to eat?' but 'what varieties to eat?'. That means that affluent people are now more inclined to aesthetic and identity of the landscape and thus most of the development issues are about the beautification of the landscape. In such cases, urban farming as mentioned by Lawson (2005) compensates food insecurity by providing urban people access to fresh products, fighting against raising food prices and improving nutrition. Urban farming helps to reduce deprivation and build cohesive communities, which in a later run, helps to maintain social well-being.

## **6.2 The community aspect of urban farming**

Kathmandu urban farming showed prominent community features by providing opportunities for both homogeneous and heterogeneous urban farmers to enhance their social well-being through farming. It was a place that encourages social interactions; a place that provides a setting for people to learn from each other; a place for many women to escape their daily routine and to recreate.

Urban farmers from the heterogeneous communities Saligram Bal Griha, Lubhu and Pulchowk Engineering College show positive affinity to their farm in terms of life quality, social contacts, livability and security. Their perception of life quality and neighborhood was also remarkably high. Many farmers mentioned that working in an urban farm makes them feel good because they can get busy, free from hustle and bustle of the city life. For them the urban farm provides a place of retreat which gives them the opportunity to reflection or a chance to escape from domestic pressures. If there was no urban farm then many of the women might not have an alternate source to recreate; Maiya could not have met her mother often; and Surya could not have known new people. It can be no wrong to say that their desire for quality life can be linked to their desire for better community.

However, as discussed from the theory chapter, like many other sociologists I believe that

high residential density can lead to a decrease in social interaction and an increase in social disintegration due to crowding, as well as reduction in the sense of community, social networks and feelings of safety. It may be the reason that the homogeneous farmers that live in compact-high density settlement do not know or tend to avoid their neighbors. However, the 'ordinary places' within the built environment and green spaces such as urban farm can be considered not only to have restorative properties but their impact on well-being is also remarkably high (Gesler, 1992, 2003; Williams, 1999 in Cattell et al., 2008, p. 546). Thus, the urban farm is important for healthy communities. There is a list of concepts outlined in the theory chapter. Those outlined concept are checked from the cases in Kathmandu to see if those concepts mentioned can also serve its purpose in Kathmandu.

### **6.2.1 Familiarity**

In the case of Kathmandu, the heterogeneous farmers show more tendencies to familiarize themselves with their surrounding by expressing high level of intimacy among themselves. For example, the relationship between the urban farmers of Lubhu was not only limited to the farm, they were also going to each other's houses, getting to know their families and inviting each other to the festivals and feast. They had developed friendly relations addressing each other as family members. However, in case of the homogeneous urban farms the urban farmers despite meeting often, do not interact. Even though, the homogeneous farmers were more familiar with their farm locations as compared to the heterogeneous farmers they prefer to be familiar strangers among many urban farmers. This case can be explicitly explained in case of the Shankamul urban farm. Beside the eight women working together, there were other farmers working next to them, but never talked to each other in the farm. When I asked those women why they never interacted with other farmers they responded that they do not know them. It may be because those encounter never encourage them to move towards next level of friendship. Or, it may be because of their difference in generation (Jacobs, 2006) since they have different ideas about farming and their requirement from a farm may also vary.

### **6.2.2 Use**

The urban farm for both the homogeneous and heterogeneous urban farmers was an everyday use place where almost all the farmers have their special memories and meanings associated with the farm. The use of an urban farm in case of Kathmandu was different, like for some farmers urban farm was a place to work, while for the others it was a place to rest, have social contact, recuperation from daily humdrum life, hobby, escape, and memories. However, the farm have multitude of use values for the farmers since the farm has versatile options. Therefore, the uses, meanings and experiences of the urban farm

cannot be divided in daily life. The regular use of the farm benefits the farmers to know their place well, their neighbor, and their contemporary farmers. This results in a comfortable environment.

### **6.2.3 Democracy and Inclusiveness**

The urban farm in Kathmandu was a democratic and inclusive place, where farmers having land was free to practice farming at his or her own desire. In two of the field study areas Saligram Bal Griha and Pulchowk Engineering College, urban farming was practiced to bring diverse groups together. Moreover, this functions extremely well. The people from both farms were seen practicing other activities than farming together. The orphan children from Saligram Bal Griha were seen to have close bonding among each other and use the farm for gathering, meeting and playing. While the multi ethnic urban farmers from Pulchowk Urban farm have expanded their friendship from being merely neighbors to more intense relation sharing also the festivals, taking active part in community meeting etcetera.

### **6.2.4 Facilities**

As mentioned in the theory chapter facilities and resources have direct impact on the social vitality of public spaces. For example, the seating provided in the Saligram Bal Gram urban farm has welcoming appeal. The children going to the farm can rest in the shadow while having small friendly conversation with their fellow friends. The raising of small ducklings, and rabbits also facilitates interactions by making the environment lively. The common open space in Pulchowk Engineering College for urban farmers besides their own private farm helps to facilitate them to gather in festivals and common programs. A lack of facilities as mentioned in theory chapter also limit the quality of people's encounters in urban farm in Kathmandu. For examples, the lack of facilities like the seating spaces in other two urban farms namely, Shankamul and Thapathali hinder further friendly interaction besides greeting 'hello'. It causes that their fleeting exchanges could never turn into more meaningful encounters.

### **6.2.5 Stewardship**

The appearance of urban farms in Kathmandu does affect public perception of an urban farm. Most of the homogeneous urban farm was very vernacular and existed there since decades therefore passer-by tend to neglect it. However, the neighboring people nearby the Pulchowk Urban farm and Saligram Bal Griha appreciate the farm so much that the attractiveness of the farm motivates the neighbour to do farming for themselves. A neighbor of the Saligram Bal Griha says that the urban farm is the jewel of their community. Also because of this constant appreciation by the neighbors, the farmers of the Pulchowk and Saligram Bal Griha Urban farm tend to take care of the surroundings more than before.

### **6.3 The influence of urban farming on day-to-day life of urban farmers**

An Urban farm influences the day-to-day life of urban farmer. Their influences are categorized into 'exposure, behavior and selection' (concept extracted from: Groenewegen et al., 2006).

#### **6.3.1 Exposure**

An Exposure to urban farm influences the health and well-being of urban farmers; through physical and psychological experience (Groenewegen et al., 2006). Urban farm provides the restorative benefits that emphasis on stress recovery and positive mood change (Korpela and Hartig, 1996, Korpela et al., 2001 in Cattell et al., 2008, p.546). Urban farmers and passerby can have restorative benefits by merely looking at an urban farm. The benefit of exposure is more pronounced for those who spend most of their time in an urban farm. It improves well-being by enhancing satisfaction, attachment and a sense of responsibility. As Groenewegen et al. (2006) mentioned exposure to natural environments reduced feeling of anger, frustration and aggression. It may also enhance feeling of social safety, reduced aggressive behavior and criminal activity. From the result section, it can be known that all the urban farmers have positive exposure to their farms. Punmaya Tandukar despite at her old age was seen in her farm. This clearly explains her attachment to the farm, whereas, Surya a farmer from Saligram Bal Griha with constant failure in his previous business venture was very frustrated with his life until he started doing farming for Saligram Bal Griha. Now, he is very positive with his life after he did farming.

#### **6.3.2 Behavior**

Urban farming influences the behavior of urban farmers since it stimulates urban farmers to be close to nature, to undertake healthy physical activities. The behavior of urban farmers has changed positively as they tend to spend more time on their farm. From the result chapter, it can be noticed that urban farms for most of the urban farmers were their everyday place where they can have 'positive informal social interaction, strengthening social ties and thereby increase social cohesion (Kweon BC, Sullivan WC, Wiley AR, 1998 in Groenewegen et al., 2006). The social cohesion by itself is thought to have a positive effect on the well-being and the feeling of safety.

#### **6.3.3 Selection**

Urban farming influences people's selection to live nearby its surrounding. Those selections are either direct or indirect. A direct selection is the people preference to live in a favorable environment that is influenced by people's well-being, While an indirect selection is the selection affected by physical factors like, people's income that allows people



to afford to live in a favorable environment (Groenewegen et al., 2006). In both cases, the selection is to live nearby natural environment. However, this selection is also influenced by migration flow that is characterized by socio-demographic characteristics like, age, income and education. In Kathmandu, almost all the urban farmers were living nearby their urban farms. The selection to live nearby the farm area was strongly emphasized by one urban farmer in Pulchowk Engineering Campus where she said, she feels suffocated to live in other places in Kathmandu that have little green in the surrounding.

## **6.4 Different purposes of farming in homogeneous and heterogeneous farming communities'**

As already mentioned in the methodology section, the urban farming community in Kathmandu can be distinguished between heterogeneous and homogeneous communities' urban farmers. From the cases in the result section, it was noticed that these homogeneous and heterogeneous community farmers have different reasons to farm and show different levels of interaction. The detail is described below:

### **6.4.1 Motivations to farming**

During field study it was also noticed that, the reasons for farming activities within the community groups were different. In the homogeneous community, especially the traditional farmers, the main purpose for them to do farming was to follow their traditional farming profession. Their primary purpose to farming was economically driven as in case of Thapathali urban farm, that is, to increase their efficiency during farming, so that they can harvest more vegetables and sell it to generate more profit. It was also seen that most of the homogeneous male urban farmers were tending to leave the farming profession while their wives and the female members of their families were seen to return to do farming even if not as a profession but as a means to utilize their free time. In addition their urban farm provides opportunities for these women, who stay home to have some income. Maxwell (1995 in Bryld, 2003) says that in most of the developing countries, especially Sub-Saharan Africa and South Asia, women are in charge of the production patterns. He gives two reasons for that. First he thinks urban cultivation fits relatively well into women's daily work pattern. Secondly, he argues in a different research (Maxwell, 1995; Dennery, 1996) done in developing countries that men generally do not regard urban farming as a business but only as a marginal activity.

In contrast, in heterogeneous communities farming, although some of the farmers do farming as a profession, their other reasons were driven by the fact that they treat urban farming as a means to know other people who they regularly see but did not have chance

to talk. They tend to use farms more often as a means to meet other farmers as in case of Pulchowk urban farm.

It may be because of this reasons that most of the young homogeneous urban farmers were tending to leave their traditional agriculture profession, while in heterogeneous urban farmers community the young urban farmers value their farms and were enthusiastic to explore several benefits their farm provides. Therefore, it can be said that, at places where the main motives to farm are to generate income, interaction with each other becomes less intense; and also the desire to farm drops.

#### **6.4.2 Level of interaction**

The homogeneous community was seen to have a small social network that was limited within their kin while heterogeneous community had higher social contacts that were very diverse. From the theoretical framework (Chapter 2) it is known that communities have two kinds of social capital. The first one is the bonding capital. The bonding capital is derived from supportive ties between kin. It binds the kin stronger than it was before. The second one is the bridging capital. The bridging capital is a weak tie that connects individuals to dissimilar groups and additional resources (Grano Vetter, 1973; Putnam, 2000 in Cattell et al., 2008). The homogeneous communities' urban farmers of Kathmandu share bonding capital that is derived from supportive ties between kin and their close relatives. Within the kin and close relatives they celebrate different rituals, festivals and feast thus making each family in the homogeneous community strong enough to not rely on other families even if they are from the same ethnicity. This same applies to other homogeneous families too. Moreover, I assume that in general, homogeneous communities lack curiosity to explore new possibilities and to know about other things. This implies to farming as well, since the homogeneous farmers are the traditional people living in the same neighborhood for generations, sharing the same farming styles, techniques, methods, cultures and beliefs there are less opportunities for the homogeneous farmers to learn from each other and to explore newness among them. Therefore, it can be said that these homogeneous farmers are a strong community, which share strong bonding among themselves but it is not open to outsiders even if the outsiders are from the same ethnicity.

While heterogeneous communities' in Kathmandu were seen to have bridging capital that connects individuals to dissimilar groups and additional resources. Such communities' farmers were noticed to have diverse community contacts. For them the urban farm was medium to establish new contacts. An urban farm for heterogeneous farmers was a place where they can display their culture and identities and learn from the differences. Each of the ethnic community in Nepal has different cultures, customs, and different ways to farm; therefore, there are obviously many things for diverse community to learn from

each other. This in fact, has become a reliable means for heterogeneous farmers to communicate with each other. Urban farming provides diverse farmers, orphan children from Saligram Bal Griha, students from Pulchowk Engineering campus hostel opportunities to meet, chat, work together or just hang out. All these factors have important benefits since they help to create integration among themselves.

#### **6.4.3 Place-use meaning with the farm**

Even though, there were subtle differences between usages of urban farms in the two communities, in the homogeneous urban farmer community old farmers were regular to their urban farm and were more nostalgic of the farm. However, some old farmers in the heterogeneous community were also nostalgic; but the case was more prominent in case of the homogeneous community. The old homogeneous farmers show higher affinity to the farm. I interpreted it as, since by tradition the homogeneous farmers' main occupation is farming, farming is the only known profession for them and thus they and their families spend most of their life time on the farm. Their festival and many rituals were also related to farming. In consequence, they develop an emotional relation with the farm. Therefore, it contains more emotional value for them. However, the young homogeneous people who abandon farming can have less emotional attachment towards the farm and the only reason for them to still keep the farm land is to respect their parents' emotional bond towards farming and nothing else. Maybe they already have plans to do something with the farm land after their parents decease.

### **6.5 Reasons for the declined urban farming practices in Kathmandu**

From the field observations, it was seen that most of the farmlands of Kathmandu are rapidly converted to residential housing. In this sub-section, I try to look at the reasons for the cause of the decline of urban farming practices in Kathmandu. During the field trip, it was quite distinct among urban farmers that on the one hand there are heterogeneous farming communities initiating farming either to overcome food insecurity or to have interaction that is more social. While on the other hand the homogeneous farming communities were tending to abandon the occupation and divert more toward other non-farming activities that have less environmental contribution. In the same time, the government is also not taking necessary measures to facilitate urban farmers in the basic ground level. Therefore, in this section, I am going to look at causes about the "why's" and "how's" for the prevailing situation of Kathmandu with some references from literature.

### **6.5.1 Change in land use, land fragmentation, and people's psychology**

As it has been seen during field study observations there are very few urban farms in the Kathmandu city as compared to the farming that was done ten years before; and the farmland is in a continuous descent. Looking back to the result section most of the farmers from the homogeneous society said they will continue to do farming until they get a good price for their land. The reason they said for selling the farm land is that there is less profit in farming then doing other non-agriculture jobs. Many property owners also sell their excessive land to maintain their lifestyle (Upreti, 2004, p. 380). Also there is a cultural and legal provision to divide parental land between sons (Upreti, 2004). This provision is increasing land fragmentation. The traditional family system in Nepal is patrilineal. It consists of the parents, their sons and unmarried daughters, daughters-in-law and grandchildren, the father's brothers together with their families and the unmarried sisters of the father if there are any. It normally includes three or four generations and has between 40 and 120 family members. In most cases, one joint family cannot be organized into one household. Thus, married sons often find a home of their own. For that purpose the family house can be either divided or, if it is financially possible, built a new house. The possibility of renting a house is only considered if it is absolutely necessary, as this is a sign of social decline. At present, the number of inhabitants in their respective homes had increased over the years. This results in a house being over crowded (Bista, 1967 in Müller, 1981, p.35). Those with the traditional family houses were able to make minor alterations only because of the limited space within a block of houses. But if they built the new house outside the dense settlements they were able to use new materials, western designs and construction ideas (Korn, 1976). This situation can be well explained from the Sankhamul case. The farm in Sankhamul was divided among brothers after the father was unable to farm himself. These brothers and the father himself sold a portion of their farm to construct comfortable housing. According to them, huge investment is needed for farming and the profit is very little. Whereas, if the farm land is either built up or given in rent or sold to some housing agency, there is more profit. If the land is sold to big housing companies then there are chances that their locality will be developed when the housing company builds new houses or apartment complexes. They believe these housing companies will bring development in the area; such as construct road, bring water and electricity. Upreti (2004, p. 375) also mentioned that 'the Lands traditionally used for a particular purpose (e.g. farming), by one group of users (e.g. tenants), is now allocated for different purposes (e.g. sale by owners to other people or build new house). This not only changes existing property relations but also implants severe conflicts in the community'.

The ease to sell the land after the 'Land act' in 1964 is also the reason to abruptly change farmland into other purposes. Most of the farmland in the past belonged to the Guthi institution while the tenure security was given to farmers. During that time, land was only



allowed for the cultivation and the building constructions were strictly prohibited. This system has greatly contributed to sustainability of towns that resulted in the protection of prime urban farm land as community property. But the land act in 1964 eliminated widely prevailing dual ownership between Guthi and farmers (Upreti, 2004). It allows the farmers to register their name in the land registration system. The farmers then have freedom to either sell their farm land or build houses. These cases of changing farming land into houses can be seen overall Kathmandu. It can also be seen in two study locations among the four case study locations. Thapathali and Sankhamul used to be farm land before. Although, there are some farmers farming in the traditional farm land at Sankhamul these farmers said that they will farm until they get good amount of money for the land to be sold or until they have enough money to make new house. While in case of Thapathali, the farmers sold their own farm land or build houses in the farm land to earn some money because they had more profit doing that than doing farming. Such a trend of losing farm land also got more momentum when the Government institutions 'Kathmandu valley town development committee and Kathmandu metropolitan' began land pooling project in 1994. The project converted the farm land into built up areas and the farmer community abruptly lost their ownership over the land resources (Upreti, 2004). For the general people Government set negative example to earn more money from their farm land.

In addition to that, the housing byelaws are not very strong in the country. The tenant can build multi-storey houses even though the built up area of the land is very small. The attraction to build such houses is because the house owner can give the houses in rent even though the living quality of the people living there is not so good. Because of that, tenant of these types of houses moves often. Therefore, there is no community formation. Also, the modern houses follow western building material, western designs and construction ideas (Korn, 1976) the courtyard system planning of the traditional houses is not followed thus there is a lack of community space for people to come together.

During the field study, it was observed that children were not encouraged to do farming by their parents. There seems to be a general misconception among urban people that farming is an inferior job and that being involved in farming degrades their social status. Consequently, even those parents, who themselves are involved in farming, are encouraging their children to pursue a career in non-agricultural profession, which is also believed to generate higher income. The reason for such a belief could be the poor economic condition of farmers in the country. From the field study, it was seen that the farmers are not paid off well from farming. However, it was noticed that if the young children were encouraged to farm, they would at least practice farming as a hobby in their later age if not as a profession. The example for such case can be seen in the Lubhu and Pulchowk campus.

There is also a change in children's playing habit. Previously, the urban kids used to play outdoor games with their friends out in the courtyard or street, but now children shows more affinity to electronic gadgets. This has negative consequences not only for young kids but also for their parents. When children play outdoors; parents also have chances to meet each other and interact with each other and the whole community.

### **6.5.2 Lack of strong policy for urban farming**

Although Nepal is an agriculture country, where 70 percent of the people are said to be farmers the policy addressing the farming development is only limited to rural farming. The plans and policy regarding farming development are focused on cereal cropping in rural areas. There is no direct policy addressing the urban farming in urban areas. It is therefore necessary to know about the policy first to further discuss the lack of policies in urban farming. Although there are many policies regarding the improvement in the farming sector, I tend to use only two, since my major objective in this research report is to explore the community aspect of urban farming and not to conduct an in-depth study of policy documents regarding farming. Some aspects of policy regarding urban farming can be incorporated with the following plans and policy. These policies are taken from Raut (2008).

#### **6.5.2.1 Agriculture Perspective Plan**

The Agriculture Perspective Plan is produced by the Government of Nepal, Department of Agriculture. It regards the agricultural sector as the lead sector for the overall economic development of Nepal. The main focus of this sector is to commercialize agriculture through various agricultural programs and to develop an overall agricultural marketing system. For that, they have prepared an Agriculture Marketing Master Plan for Kathmandu Valley (FAO) and a National Agricultural Marketing Master Plan (JICA). They also introduced a broadcasting system via FM Radio of agricultural marketing information at central, regional and local levels on a daily basis. The major objectives for them are to help to achieve the attainment of the national objective of poverty alleviation and food security in the country through an assured and efficient agricultural marketing system. Their specific objectives are as follows:

- To construct and strengthen the marketing infrastructure for agriculture
- To collect and disseminate agricultural marketing information
- Formation of an Agri produces Market Management Committee (APMMCs) and handing over the management of agri-market centers
- To create an environment for incentive price of the farmers and at the same time helps the consumers to attain access to agricultural products at comfortable prices
- To conduct marketing extension programs
- To carry out relevant agriculture marketing research activities to support the future

marketing policies and programs

- To facilitate and support agro entrepreneurs' associations for promoting agribusiness and export

#### **6.5.2.2 Kathmandu Valley Long Term Development Plan**

The Kathmandu Valley Long term development plan was prepared by the Kathmandu valley town development committee. It envisages different areas for the integrated development of the valley with the sustainable development of urban areas and a balanced economic linkage with Kathmandu valley rural areas. The plan has redefined the boundary of the urban area with increased jurisdiction that covers the five municipalities of the valley viz. Kathmandu Metropolitan City, Lalitpur Sub Metropolitan city, Bhaktapur Municipality, Madhyapur Municipality and Kirtipur Municipality; and urbanized VDC's of the valley. The policy aims at the integrated infrastructure development and solid waste management system. The main objective and programs of the plan regarding urban farming are:

- Conservation of agricultural land and ground water
- Maintaining the open land around the city
- Minimizing the food deficiency and supply from the valley itself to some extent
- Balancing environment and sustainable development
- Creating mixed land use 40:60 (settlement area: green area)
- Demarcating and protection river banks by formulating and implementing the special area byelaws
- Reserving land for urban expansion

#### **6.5.2.3 Local Self Governance act**

The act is formulated as per the need of the decentralization process to enable the local bodies (District Development Committee, Village Development Committee and municipalities) to sustain economically and legally. The act is an addition to the municipal act of 1998. The main aim of Local Self Governance act (LSGA) regarding urban farming can be enumerated as:

- Plantation on either side of the roads and other necessary places in the municipality area.
- To protect barren land of the municipality and frame it by bye-laws
- To arrange Haat Bazaar (Open market)
- To make land-use maps of the municipality area
- To develop, green zones, parks and recreational areas in city area

However, looking at these plans it can be said that there is still a lack of deductive theory in the policy documents that deals with the explanation of urban farming in Kathmandu. These plans and policy have not mentioned the policies that facilitate urban farmers to

commercialize their product at the urban market. Nor have they talked about the small scale farmers in city level. They are only dealing with the commercial level of farming or infrastructure development for industrial farming. Even though, planning policy has adopted agriculture economy in the past, the issue of official recognition and promotion of urban farming in present time is a new phenomenon. Many policy documents are talking about the improvement of the environment and migration but they do not perceive urban farming as a social medium to increase well-being in community.

## **6.6 Conclusion**

In this chapter I discuss my argument based on my research questions and theoretical framework produced in chapter 2. The discussions were categorized into- the primary reasons to do urban farming in Kathmandu; the community aspect of urban farming; the influence of urban farming on day-to-day life of urban farmers; different purposes of farming in homogeneous and heterogeneous farming communities; reasons for the declined urban farming practices in Kathmandu. These topics are based on the list of concepts formed in theory chapter. In the following chapter I will check the link between urban farming, social interaction and community well-being.





# chapter 7

## Conclusion and recommendations



farmer ploughing his field in the background-Boudhanath Stupa  
<http://www.facebook.com/photo.php?fbid=154997231206188&set=a.154997007872877.25841.154982454540999&type=1&theater>

Figure 3.15 Haphazard city growing-Kathmandu



## **7.1 Conclusion and recommendations**

The research question presented at the beginning of the thesis is 'how can urban farming help the people of Kathmandu to know each other?' Qualitative research method was followed to explore the solutions to the research question. This method was chosen so that the narrative story of the farmers can be put into coherent story in the report as well.

The culture, custom and the way of living in Kathmandu is very diverse because of people's different ethnicity. That is why I categories urban farmers of Kathmandu into two groups, namely homogeneous and heterogeneous urban farming communities. Traditional farmers of Kathmandu are predominantly from one ethnic group so I categories them as homogeneous urban farming communities. The new farmers in Kathmandu are newly established and have very diverse ethnicity, I categories them as heterogeneous urban farming communities. Also during the field trip I noticed that in most of the cases the farming was initiated to overcome food related problems but there were new initiations. Some homogeneous and heterogeneous urban farming communities were doing urban farming for social purposes like to utilize free time. Therefore, I take two functions of urban farming as the base for my research. One is urban farming as a medium to overcome food related problem and the other is urban farm as a form of public space.

For this I did intensive literature study to know the connection between urban farming and its connection to public spaces. But I noticed that many of the urban farming studies were carried out from planning perspective or ecological and therapeutic benefits of urban farming. Those literature points out some social benefits but they were not discussed in detail. Therefore, in this report, I give more emphasis to public space function of an urban farm because at present Kathmandu is marked by haphazard city growth and rapid unplanned city expansion resulting into no greenery situation within the city that have no defined public spaces. In that case I explore the public space aspect of urban farming and present that urban farm can be an alternative to defined public spaces like green parks. Although I am aware that urban farming does not facilitate people as much as public spaces, like parks, do in term of providing sufficient place to recreate for many people but urban farming has diverse options to offer to people. And, even if there are only few people to enjoy the opportunity to the garden in an urban farm plots many people can enjoy watching them as passerby.

List of concept were formed from literature study that was constantly checked to the data obtained from interviews and observations. What I found from interviews and observations was, even though the homogeneous farmers were reluctant to talk to their neighbor



farmers that were also from the same ethnicity they share strong bonding within their kin and their close relatives. It does not in any way mean that these farmers contribute less to the community. In fact, these homogeneous urban farmers have strong communities among themselves so they do not find it necessary to talk or interact with other people. However, because of constantly seeing other farmers adjacent to their farms these homogeneous farmers have become 'familiar stranger'. On the other hand, the heterogeneous farmers were sharing a more relaxed form of interaction, which started from 'passive contacts to high intensity close friendship' as mentioned by Gehl (1987) with people from the same ethnicity as well as from other ethnicities.

It is clear now, urban farmers both from homogeneous and heterogeneous urban farming communities used urban farm as their part of everyday life. They have strong place attachment with their farm and have several meaning and stories of the farm. They appreciate the environment created by the farm. Urban farm influences their day-to-day life. The insight found was obtained from the people's point of view who was working regularly in the farm. This clearly illustrates that urban farm demonstrate its function as public space that encourage urban farmers everyday relation with each other. Urban farm in Kathmandu brought people together. It helps to create new friendship and was a medium to take their friendship to more meaningful and strong relationship. Urban farming in Kathmandu increase the well-being by helping diverse people to know each other, celebrate their diversity and learn from their differences.

According to the 'Total Utilitarianism' theory improvement in individual well-being can lead to the betterment of community well-being (Perman et al., 2003). Improvement in individual well-being also have positive externality effect in the environment and does lead towards Pareto improvement of social welfare while enhancing the situation of every one in society.

This research teaches me that community well-being is an abstract term and has very broad definition. It is known that urban farming can definitely help to initiate interaction, which leads towards social cohesion and integration. It helps to create social well-being in the community. But as already discussed, community well-being incorporates very wide definitions that range from individual well-being to well-being of the country itself. So, it will be wise to say social well-being can increase community well-being but the community well-being is not only influenced by social well-being there are many other factors that that influences community well-being. Therefore, community well-being in this report is even the simplest action to bring people together to have a steady supply of fresh, healthy and varied products, as in case of Havana, even if it does not facilitate remarkable interaction between people. Therefore, it can be said that in the case of Kathmandu, com-

munities made by urban farms can welcome social progress and development. Through urban farms it is possible to see the revival of community well-being.

I strongly believe that there should also be a very prominent government role in urban farming practices. Lack of water on the farm and lack of incentive for farmer were mentioned by many farmers during the interview as the main factors that demotivate them to continue farming. The Government as a policy maker can highly influence the direction of farming practices in the city. This can be seen from the cases in Havana and in Europe and America. The role of the media can be an additional benefit since they have the capacity to influence the mass in terms of providing farming knowledge, broadcasting government messages, forming a forum to discuss farmers' problems with experts and providing them with better solutions.

The main limitation for the research was the limited field study time. I had only a month and a half time to conduct my field study. It is obvious that if I could have done the field study for longer period the result could have been more detailed and effective. However, the limited timeframe for the field study cannot be considered a problem. The favorable farming season, weather all incorporates to make the field trip fruitful.

I believe my research report can shed light on the possibilities of urban farming in Kathmandu to increase well-being. However, more detailed research needs to be conducted to attain more concrete conclusions. This research report can be a help for a similar research topic but it cannot be guaranteed that the research will be 100 percent helpful for others because it is context dependent. Thus, other researcher need further research depending on their context.

Final saying:

If the concept of traditional community is revived again with some alteration to the present urban needs of Kathmandu in addition to strong government support for farming practices then urban farming can be one of the means to outshine lack of feeling of community in Kathmandu.



# References

- Adhikari, A. P. (2008) 'Towards Developing Indicators of Environmental Sustainability for Kathmandu, Nepal', in *Himalayan Policy Research Conference*, University of Wisconsin, Madison,
- Andini, D. (2010) *LIVING IN DIVERSITY: Exploring social interactions in multicultural neighbourhood*, Wageningen Wageningen University, unpublished.
- Andini, D., Jaspers, M., Lammertink, A. and Shrestha, S. (2010) *SAL 34806: Advanced Methods and Techniques of Socio-spatial Analysis*, Wageningen: Wageningen.
- Andreas, P., Sangha, N. I. S. and Project, U. D. t. L. E., eds. (1995) *Images of a century: the changing townscapes of the Kathmandu Valley* Kathmandu: Deutsche Gesellschaft für Technische Zusammenarbeit : Urban Development through Local Efforts Project.
- Appeaning Addo, K. (2010) 'Urban and Peri-Urban Agriculture in Developing Countries Studied using Remote Sensing and In Situ Methods', *Remote Sensing*, 2, 497-513.
- Baxter, P. and Jack, S. (2008) 'Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers', *The Qualitative Report*, 13(4).
- Berleant, A. (1997) *Living in the landscape: toward an aesthetics of environment*, University Press of Kansas.
- Bhattarai, P. (2005) *Migration of Nepalese youth for foreign employment: Problems and prospects- A Review of Existing Government Policies and Programmes*, Kathmandu: Youth Action Nepal (YOAC).
- Blummer, H. (1969) *Symbolic Interactionism: Perspective and Method*, California University Press.
- Bryld, E. (2003) 'Potentials, problems, and policy implications for urban agriculture in developing countries', *Agriculture and Human Values*, 20, 79-86.
- Cattell, V., Dines, N., Gesler, W. and Curtis, S. (2008) 'Mingling, observing, and lingering: Everyday public spaces and their implications for well-being and social relations', *Health & Place*, 14(3), 544-561.
- CBS (2001) *Nepal Living Standards Survey 2000/01*, 2, Kathmandu: His Majesty's Government of Nepal.
- Crouch, D. (2003) 'Spacing, performing, and becoming: tangles in the mundane', *Environment and Planning A*, 35, 1945 - 1960.
- Dahal, D. R. (2005) 'Socio-cultural diversity for dialogue' in Bajracharya, R. D., Bhattachan, K. B., Dahal, D. R. and Khatri, P. K., eds., *Cultural and Religious Diversity: Dialogue and Development*, Kathmandu: United Nations Educational, Scientific and Cultural Organisation.
- Day, G. (2006) *Community and everyday life* London and New York: Taylor & Francis e-Library.
- de Haan, H. (2008) 'Social interaction and neighbourhood control: the significance of walking and narratives', 73-96.
- de Haan, H. (2009) *Lecture 6: Using Space*, SAL 33306 Space, Place and Society, Wageningen: Wageningen University, unpublished.
- Dempsey, N. (2008) 'Quality of the Built Environment in Urban Neighbourhoods', *Planning, Practice & Research*, 23(2), 249-264.
- Dempsey, N. (2009) 'Are good-quality environments socially cohesive? Measuring quality and cohesion in urban neighbourhoods', *Town Planning Review*, 80(3), 315-345.



- Díaz, J. P. and Harris, P. (2005) 'Urban agriculture in Havana: Opportunities for the future' in Viljoen, A., Bohn, K. and Howe, J., eds., *Continuous productive urban landscapes: Designing urban agriculture for sustainable cities* Architectural Press, 135-145.
- Dines, N., Cattell, V., Gesler, W. and Curtis, S. (2006) *Public spaces, social relations and well-being in East London*, Joseph Rowntree Foundation.
- Dixit, K. M. (2008) 'HENRY AMBROSE OLDFIELD'S PAINTINGS OF NEPAL', *Asian Affairs*, 39(3), 370-380.
- Franck, K. A. (2005) 'Food + The City', *Architectural Design*, 3-127.
- Gehl, J. (1987) *Life between buildings : using public space*, New York: Van Nostrand Reinhold.
- Giddens, A. (1979) *Central Problems in Social Theory: Action, Structure, and Contradiction in Social Analysis*, California: California University Press.
- Giles-Corti, B. and Donovan, R. J. (2002) 'The relative influence of individual, social and physical environment determinants of physical activity', *Social science & medicine*, 54(12), 1793-1812.
- Glendinning, A., Nuttall, M., Hendry, L. and Kloep, M. (2003) 'Rural communities and well-being: a good place to grow up?', *Sociological Review*, 51(1), 129-156.
- Groenewegen, P., van den Berg, A., de Vries, S. and Verheij, R. (2006) 'Vitamin G: effects of green space on health, well-being, and social safety', *BMC Public Health*, 6(1), 149.
- Hall, D. (1996) *Community Gardens as an Urban Planning Issue*, unpublished thesis Simon Fraser University, The University of British Columbia.
- Hester, R. T. (2006) *Design for Ecological Democracy*, Cambridge: The MIT Press.
- Hickman, M., Crowley, H. and Mai, N. (2008) 'Deprivation and social cohesion' in *Immigration and social cohesion in the UK: The rhythms and realities of everyday life*, The Homestead: Joseph Rowntree Foundation.
- Hopkins, R. (2008) *The transition handbook: From oil dependency to Local resilience*, Totnes: Green Books Ltd.
- Hou, J., Johnson, J. M. and Lawson, L. J. (2009) *Greening cities, growing communities : learning from Seattle's urban community gardens*, Washington, D.C [etc.]: Landscape Architecture Foundation [etc.].
- Hough, M. (2002) *Cities and Natural Process*, Taylor & Francis e-Library.
- Howe, J. and Wheeler, P. (1999) 'Urban food growing: The experience of two UK cities', *Sustainable Development*, 7, 13-24.
- Hudson, M., Phillips, J., Ray, K. and Barnes, H. (2007) 'Social cohesion in diverse communities', *Joseph Rowntree Foundation*, available: <http://www.jrf.org.uk/publications/social-cohesion-diverse-communities> [accessed
- Jacobs, J. (1961) 'The uses of neighbourhood parks' in *The death and life of great American cities*, Vintage.
- Jacobs, M. (2006) *The production of mindscapes : a comprehensive theory of landscape experience*, PhD thesis Wageningen University.
- Jacobs, M. (2011) *Week 3: Environmental Attitudes*, SAL-36306 Environmental Psychology Wageningen: Wageningen University, unpublished.
- Kaptein, E. and Frederix, V. (2010) 'SUPPLYING THE CITY: Towards a multifunctional landscape in Maastricht-Valkenburg', in *Landscape Legacy*, Maastricht, the Netherlands, Landscape Architecture and Planning

Between Art and Science,

Khatriwada, Y. R. (2010) *Monetary Policy for Fiscal Year 2010/11*, Kathmandu: Nepal Rastra Bank.

Kneafsey, M., Cox, R., Holloway, L., Dowler, E., Venn, L. and Tuomainen, H. (2008) *Reconnecting Consumers, Producers and Food*, USA: Berg.

Koh, J. (2009) *Landscape Poetics and Cultural Imagination*, LAR-33306 State of Art Practices in Landscape Architecture, Wageningen Wageningen University, unpublished.

Korn, W. (1976) *The Traditional Architecture of the Kathmandu Valley*, Bibliotheca Himalayica.

Larjosto, V. (2010) 'Designing urban agriculture for informal settlements– aspects from Brazil'.

Lawson, L. J. (2005) *City Bountiful- A century of community gardening in America*, England: University of California Press.

Mason, J. (2002) *Qualitative Researching*, London: Sage Publication.

Maye, D., Holloway, L. and Kneafsey, M. (2007) *Alternatives Food Geographies*, UK: Elsevier.

Means, M. and Tims, C. (2005) *People Make Places: growing the public life of cities*, United Kingdom: © Demos.

Müller, U. (1981) *Timi Social and Economic studies on a Newar Settlement in the Kathmandu Valley*, Geographischen Instituts der Justus Liebig- Universität Giessen.

Novo, M. G. and Catherine, M. (1999) 'Urban Agriculture in the city of Havana a popular response to a crisis' in N. Bakker, M. D., S. Guendel, U. Sabel Koschella, H de Zeeuw, ed. *Growing Cities, Growing Food Urban Agriculture on the Policy Agenda: A Reader on Urban Agriculture*, Deutsche Stiftung fuer internationale Entwicklung (DSE), Feldafing, 329-348.

NRB (2010) *Current Macroeconomic Situation: Based on the Seven Months' Data of the FY 2010/11*, Kathmandu: Nepal Rastra Bank.

Ohmer, M. L., Meadowcroft, P., Freed, K. and Lewis, E. (2009) 'Community Gardening and Community Development: Individual, Social and Community Benefits of a Community Conservation Program', *Journal of Community Practice*, 17, 377-399.

Perman, R., Ma, Y., McGilvray, J. and Common, M. (2003) *Natural resource and environmental economics*, Harlow: Pearson Education Limited.

Peters, K. and Haan, H. d. (2010) 'Everyday spaces of inter-ethnic interaction: The meaning of urban public spaces in the Netherlands'.

Pradhan, B. B., Shrestha, B. R., Punjali, K. R., Lama, C. N., Manandhar, A. B., Thapa, K., Pradhan, B., Tuladhar, B., Ghimire, D. and Chitrakar, G. R. (2007) *Kathmandu Valley Environment Outlook*, Kathmandu: International Centre for Integrated Mountain Development.

Raut, U. B. (2008) *Urban agriculture for sustainable urban development Kathmandu*, unpublished thesis Tribhuvan University.

Runciman, W. G. (1991) 'The Nature of Social Action ' in *Weber: Selections in Translation*, Cambridge Cambridge University Press, 7-32.

Saito, Y. (2007) *Everyday aesthetics*, Oxford University Press.

Shaftoe, H. (2008) *Convivial urban spaces: creating public urban places*, London: Earthscan.

Shrestha, S. (2010) *Urban Farming for Sustainable Living in Weusthag*, LAR 60318: Individual assignment phase III-Master Atelier, Wageningen Wageningen University, unpublished.

Stephan, B., Carl, F. and Johan, C. (2010) 'Social–ecological memory in urban gardens—Retaining the capacity for management of ecosystem services', *Global Environmental Change*, 20, 255–265.

Subedi, B. P. (2010) 'Ethnic/caste diversification in Kathmandu metropolitan: Changing social landscape of a capital city', *Journal of Geography and Regional Planning*, 3(8), 185-199.

Taylor, A., Wiley, A., Kuo, F. and Sullivan, W. (1998) 'Growing up in the inner city - green spaces as places to go', *Environment & Behavior*, 30(1), 3 - 27.

Taylor, L. (2008) *A Taste for Gardening: Classed and Gender Practices*, England: Ashgate Publishing Limited.

Thwaites, K. (2001) 'Experiential Landscape Place: an exploration of space and experience in neighbourhood landscape architecture', *Landscape Research*, 26(3), 245-255.

Tiwari, S. R. (1999) 'Kathmandu Valley Urban Capital Region and Historical Urbanism- Historical Environment Management: Lessons from History'.

Upreti, B. (2004) *Land conflict in Nepal: Peasant's struggle to change unequal agrarian social relations*, [online], available: <http://www.informaworld.com/10.1080/1366880042000295763> [accessed 15-09-2010].

Van den Berg, A. (2011) *Week 2: Health benefits of nature*, SAL 36306 Environment Psychology, Wageningen: Wageningen University, unpublished.

Veenhuizen, R. v., ed. (2006) *Cities Farming for the Future - Urban Agriculture for Green and Productive Cities*, Philippines: International Institute of Rural Reconstruction and ETC Urban Agriculture.

Viljoen, A., Bohn, K. and Howe, J. (2005) *Continuous productive urban landscapes: designing urban agriculture for sustainable cities*, First ed., Architectural Press.

Weber, M. (1978) *Economy and Society: An Outline of Interpretive Sociology*, USA: University of California Press.

Worpole, K. and Knox, K. (2007) 'The social value of public spaces', *Joseph Rowntree Foundation*, available: <http://www.jrf.org.uk/publications/social-value-public-spaces> [accessed

Yin, R. K. (2004) 'Case study Methods' in Camilli, G., ed. *Complementary methods for research in Education*, Washington, DC: American Educational Research Association.

Yin, R. K. (2009) *Case study research : design and methods*, *Applied social research methods series;vol. 5*, Los Angeles, CA [etc.]: Sage.

Yücesoy, E. Ü. (2006) *Everyday public space, Turkish immigrant women's perspective*, Amsterdam: Het Spin-huis Publishers.

## **list of figures**

All pictures are the property of author unless otherwise stated

### ***Chapter 2***

**Fig. 2.1** Research framework

### ***Chapter 3***

**Figure 3.1** Map of Nepal and Kathmandu with dotted line showing the trade relation with China and India. The circles in Kathmandu Valley map represent its three districts

**Source:** Nepal Survey Department

**Figure 3.2** Progressive urban growth of Kathmandu Valley from 1967 to 2000

**Source:** Nepal Survey Department

**Figure 3.3** Compact traditional settlement located on ridges fallow and un-irrigated hill tops

**Source:** Korn, 1976

**Figure 3.4** Festival celebrated in surrounding of Annapurna Temple (Goddess of crops)-the temple is covered by puffed rice to celebrate the harvest

**Source:** Andreas et al., 1995

**Figure 3.5** Festival celebrated in agriculturally lean seasons

**Source:** Andreas et al., 1995

**Figure 3.6** Street and alleys used for festivals

**Source:** Andreas et al., 1995

**Figure 3.7** Example of typical Tol-each Tol have its own courtyard

**Source:** Korn, 1976

**Figure 3.8** Layout of Traditional town square-Plan and Aerial view

**Source:** Andreas et al., 1995, Korn, 1976

**Figure 3.9** People gathering and buying and selling animal near Maha baudha Vihar (Buddhist monastery)

**Source:** <http://www.facebook.com/photo.php?fbid=155565541149357&set=a.154987101207201.25834.154982454540999&type=1&theater>

**Figure 3.10** People selling vegetables in city square Basantapur

**Source:** <http://www.facebook.com/photo.php?fbid=155565541149357&set=a.154987101207201.25834.154982454540999&type=1&theater>

**Figure 3.11** Traditional street scene of Kathmandu Valley

**Source:** Dixit, 2008

**Figure 3.12** Swayambhu Stupa in the hill top agriculture field and Vishnumati river in its basin



*Source:* <http://www.facebook.com/photo.php?fbid=179279922111252&set=a.154993321206579.25838.154982454540999&type=1&theater>

**Figure 3.13** Hindu Temple Pashupati- river Bagmati flow by its side and mountain Ganesh in its background

*Source:* <http://www.facebook.com/photo.php?fbid=178293598876551&set=a.15499321206579.25838.154982454540999&type=1&theater>

**Figure 3.14** farmer ploughing his field in the background-Boudhanath Stupa

*Source:* <http://www.facebook.com/photo.php?fbid=154997231206188&set=a.154997007872877.25841.154982454540999&type=1&theater>

**Figure 3.15** Haphazard city growing-Kathmandu

#### ***Chapter 4***

**Figure 4.1** Heterogeneous community urban farm

**Figure 4.2** Homogeneous community urban farm

#### ***Chapter 5***

**Figure 5.1** Saligram Bal Griha Urban farm

**Figure 5.2** Saligram Bal Griha Urban farm with solar boiler in the foreground

**Figure 5.3** Saligram Bal Griha and its Urban farm

**Figure 5.4** Systematic farming practice in the slope land

**Figure 5.5** Sitting space for visitors and orphanage children-idol of Buddha and animals like rabbit and duck behind bars make the environment lively

**Figure 5.6** Solar panel and solar dryer-panel is used for hot water and dryer is used to dry vegetables to use in winter

**Figure 5.7** Farmers working in the farm

**Figure 5.8** Urban farm Pulchowk Engineering College

**Figure 5.9** Staff working in his field

**Figure 5.10** An old woman collecting food from her urban farm

**Figure 5.11** Food kept for drying in the sun

**Figure 5.12** Ladies celebrating Holi in Teacher's Quater ground

**Figure 5.13** Fun gathering in Girls Hostel

**Figure 5.14** Hostel girls and staff gathering for Christmas celebration

**Figure 5.15** Urban farm in Sankhamul

**Figure 5.16** Old picture of Sankhamul area showing farm land, bridge

**Source:** Nepal Survey Department

**Figure 5.17** Recent picture of Sankhamul with farm land rapidly converted into housing Blocks

*Source:* Nepal Survey Department

**Figure 5.18** Group of women doing farming together

**Figure 5.19** Women selling the vegetables produced from her adjacent farm

**Figure 5.20** Rapid development of Thapathali Area from 1965 to 2010

*Source:* Corona Image, Ikonos image, Google Image: Nepal Survey Department

**Figure 5.21** Urban farm in Thapathali

**Figure 5.22** Fencing around the farm to protect from vandalism by Ganesh Yuba Club

**Figure 5.23** Women from Thapathali Urban farm selling vegetables in evening nearby their farm

**Figure 5.24** Collages of negative development and positive initiatives

**Figure 5.25** Maiya helping her mother in their farm

**Figure 5.26** Narayan Das in his farm

**Figure 5.27** Bhakta farming with her colleague her daughter is standing by her side

**Figure 5.28** Group of women taking break from their farming activities while one woman was indifferent to the other women activities

**Figure 5.29** Bhakta Acharya's daughter playing in the farm

## **list of tables**

**Table 2.1** Havana: an example to overcome food insecurity through urban farming

**Table 2.2** Salop Drive market Garden, Sandwell

**Table 2.3** Allotment Garden in Zestienhoven, Rotterdam

**Table 2.4** Example from America and Europe: from productive to consumptive urban farm

