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Including low income plots in land pooling: A case of Icchangu Narayan
land pooling project, Kathmandu, Nepal

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Including Low Income plots in land pooling: A case of Icchangu Narayan land pooling project, Kathmandu, Nepal

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Summary

Land Pooling project at Kathmandu is successful in converting agricultural land into urban with the infrastructures but it has not increased in the supply of serviced plots to low income group. Even though there is the mechanism of cross subsidy for low income group within land pooling as given by Town Development Directives (TDD) 2005 of Nepal that “up to 10% of the reserve plots could be allocated for low income and the excluded people”, it is not being implemented in any of the projects. This research is about Icchangu Narayan land pooling project at Kathmandu which is a unique case in context of Nepal. It is the only case in Nepal in which government has bought land from the reserve plots of land pooling in order to construct apartment building for low income people instead of getting it as a provision given by TDD. This research in this context is carried out to explain the factors that have influenced the abandonment of the inclusionary provision in Icchangu Narayan land pooling project. Moreover identification of the reasons behind the abandonment of inclusionary provision will help government to overcome it which then drives towards the aim of capturing values from land pooling for affordable plots.

This research is an explanatory research and the research strategy used is single holistic case study. It has analysed the unique case of Icchangu Narayan and has explained the factors provided by literature in relation to the events of the context. This research deals with the qualitative data and has used semi-structured interviews, observations and official documents for the collection of primary data. Likewise secondary data sources were different legal and policy documents, literatures and newspaper which helped to increase the validity of the research through data triangulation. Moreover purposive quota sampling was used and government officials from Department of Urban Development and Building Construction and Kathmandu Valley Development Authority and land owners associated with the users committee of Icchangu Narayan land pooling project were taken into sample for the interview. Furthermore the interviews were transcribed and then analysed using Atlas-Ti software for the results.

Analysis of the primary and the secondary data gave the findings that the inclusionary provision was not designed properly into the legal and policy framework and it is not enforceable. Government has not initiated the provision in practice and officials have the view that it is unfair for land owners to bear the cost of everything as the project is completely financed from their contribution and government has not put any share. Furthermore land market of the area is found active at present which was able to increase the land values drastically. However in the beginning it was difficult to sell the reserve plots as people were waiting for infrastructure. Also it was found that due to the uncertainty of market, low income plots could not be designed anticipating market rate buyers will pay for that. Therefore if the inclusionary provision has to be enforced, there would be two things; either the land owner’s contribution has to be increased or they would have to compromise with the quality of infrastructure. In both cases, land owners would have to pay and they would not support for that. It was found that inclusion has never decreased the land prices. Nevertheless analysis shows that people are worried and curious about the identity of their new neighbours whom government is bringing in their neighbourhood.

In conclusion inclusionary provision in Nepal is just a political tool for symbolic gesture which was not real from the beginning. Among the six factors provided by literature, four factors; Political will and government’s capability, legal and policy framework, public support and effect on land owner’s contribution came out to be the most prominent factor which has influenced the abandonment of inclusion of low income plot in the Icchangu Narayan land pooling project. Then the remaining two factors from literature, land market

condition and effect of inclusionary plot on land values which seems perfect today have also influenced the abolition of inclusionary provision in the initial phase. In addition to these, one factor “effect of inclusion on infrastructure quality” is derived from the case study which also came out as an important hindering factor for the inclusion. Furthermore Icchangu Narayan resulted to be a typical value increasing land pooling project which is beyond the affordability of the poor. To overcome the issue of affordability, government has to look for the practical implementation of the inclusionary provision in land pooling and based on the findings this research has made three recommendations; to establish mandatory and realistic inclusionary programs, to develop subsidy mechanism from government and to exclude involvement of private consultancy at the crucial stages of project. Finally this thesis ends with some scope for future researchers.

Key words: Land pooling, inclusion of low income plots, affordable housing, land value capture, Icchangu Narayan land pooling project.

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Abbreviations

DUDBC	Department of Urban Development and Building Construction
DPR	Detailed Project Report
GLD	Guided Land Development
KMC	Kathmandu Metropolitan City
KVDA	Kathmandu Valley Development Authority
KVTDC	Kathmandu Valley Town Development Committee
LP	Land Pooling
LVC	Land Value Capture
NSP	National Shelter Policy
TDCA	Town Development Committee Act 1962
TDPIA	Town Development Plan Implementation Act 1972
TDA	Town Development Act 1988
TDD	Town Development Directives 2005
TDC	Town Development Committee
TDPIC	Town Development Plan Implementation Committee
TPS	Town Planning Schemes
US\$	US Dollars
Rs	Nepalese currency

Exchange rate taken is 1US\$=95.98 Rs for the year 2014

Land Prices are all adjusted for inflation taking base year=2014.

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Chapter 1: Introduction

1.1 Background

Kathmandu valley being the administrative, political and economic centre of Nepal, urbanization here started in the 1950s which accelerated after the 1970s. According to (World Bank, 2013) with the population of 2.5 million, the valley is one of the fastest growing metropolitan areas in south Asia which is growing at the rate of 4% each year. Rapid urbanization transformed the traditional historic landscape of the valley whereby converting more and more agricultural and forest land into the built up areas (Thapa and Murayama, 2009). Yet the valley faces deficiency of housing plots. It was estimated that the total number of dwelling units needed by 2021 is 435,662 and the dwellings needed for the urban poor (below poverty line) is 14,376 (Shrestha, 2010).

Planned development was initiated in Nepal after the enactment of Town Development Committee Act (TDCA) 1962 and Town Development Plan Implementation Act (TDPIA) 1972. In 1977 government implemented two sites and services program. However these projects became a failure as there was the high degree of resistance by the owners due to low compensation, displacement of the original inhabitants and delay in project completion. Also there were administration problems and the actual beneficiaries were not the low income group people but the middle and high income groups (UN-HABITAT, 2010).

Enactment of Town Development Act (TDA) 1988 after the abandonment of TDCA and TDPIA came up for the control of land use and enable land development in participatory approach. Thereafter Kathmandu Valley Development Authority (KVDA) came up with the two models of land development: Guided Land Development (GLD) and Land pooling (Shrestha, 2010). GLD came up with the idea of providing access road either new or only improvements of the existing plots which came up with the problem of rapid construction of houses on the agricultural land. Nonetheless these programs have some serious drawback of lacking the updated cadastral and constructing expensive access road as per existing site topography (UN-HABITAT, 2010). Under GLD government opened 324 km of access road (Shrestha, 2010). Nevertheless there are not new plans for GLD and it is limited only to the projects which are already in the plan.

Land developments through government agencies were not sufficient to meet the growing demand of urban population. Then with the approval of the Ownership of Joint Housing Act 1997, government started encouraging the private real estate developers for the supply of serviced land and housing. The contribution of private developer of land development is 68 hectares supplying 3381 plots, housing developer is 80 hectares of land producing 4245 housing units and apartment developer is 50 hectares with 15511 dwellings units (Neupane, 2014) as shown in Table 1 below.

Another major actor in the land development of the valley is the land brokers. They work in local level without license; subdivide land with the demarcation of roads but with or without services like electricity, sewerage and parks. They along with local land owners contributed in adding more than 1270 hectares of land in Kathmandu and Lalitpur municipalities in between 1971 and 1981 (Shrestha, 2010). Therefore in present time sectors contributing in the land development and housing of the valley are the Government through land pooling projects, real estate developers and the land brokers. However this research considers the land development from the government side only that is the land pooling projects.

Land Pooling has proved to be successful for land development in Nepal as it is the cost recovery method of land development and provides serviced land to the original landowners

(Sorensen, 2000, Karki, 2004). The term land pooling has different names in different countries. In Japan and South Korea it is termed as land readjustment, in Taiwan and Indonesia land consolidation and in Canada land re-plotting and in Nepal and Australia it is known as land pooling (Archer 1994, p. 41 as mentioned in (Karki, 2004)). However it refers to the technique of financing and managing urban land development with the participation of landowners whereby the assembled un-serviced and irregular land is re-parcelled with the provision of necessary infrastructures and the project cost is recovered by the sale of some reserve plots and the remaining plots is returned back to the original land owners with their proportional share (Archer, 1994 as mentioned in (Karki, 2004)).

Table 1: Completed Land Development Projects at Kathmandu

S.N	Type of land development	Area (Hectares)	Development Agency
1.	Sites and Services	37.34	KVTDC
2.	Guided Land Development(GLD)	324km of access road is developed	KVTDC
3.	Land Pooling	259	KVTDC, KVDA, TDC, TDPIC, KMC, Municipality
4.	Land Development Developers	68	Private Developers
5.	Housing Developers	59	Private Developers
6.	Apartment Developers	100	Private Developers
7.	Land brokers	Major supplier of land but without license	

Note: KVTDC= Kathmandu Valley Town Development Committee, KVDA= Kathmandu Valley Development Authority, TDC= Town Development Committee, TDPIC= Town Development Plan Implementation Committee, KMC= Kathmandu Metropolitan City

Source: Shrestha (2010); UN-HABITAT (2010); Neupane (2014)

Table 1 above illustrates that land pooling is the dominant method which has so far developed the maximum land in Kathmandu. Till date KVDA has completed 12 land pooling projects developing about 259 hectares of land with 12160 housing plots. Also there are 10 on-going projects which will develop around 405 hectares of land (Neupane, 2014) as shown in Table 2 below.

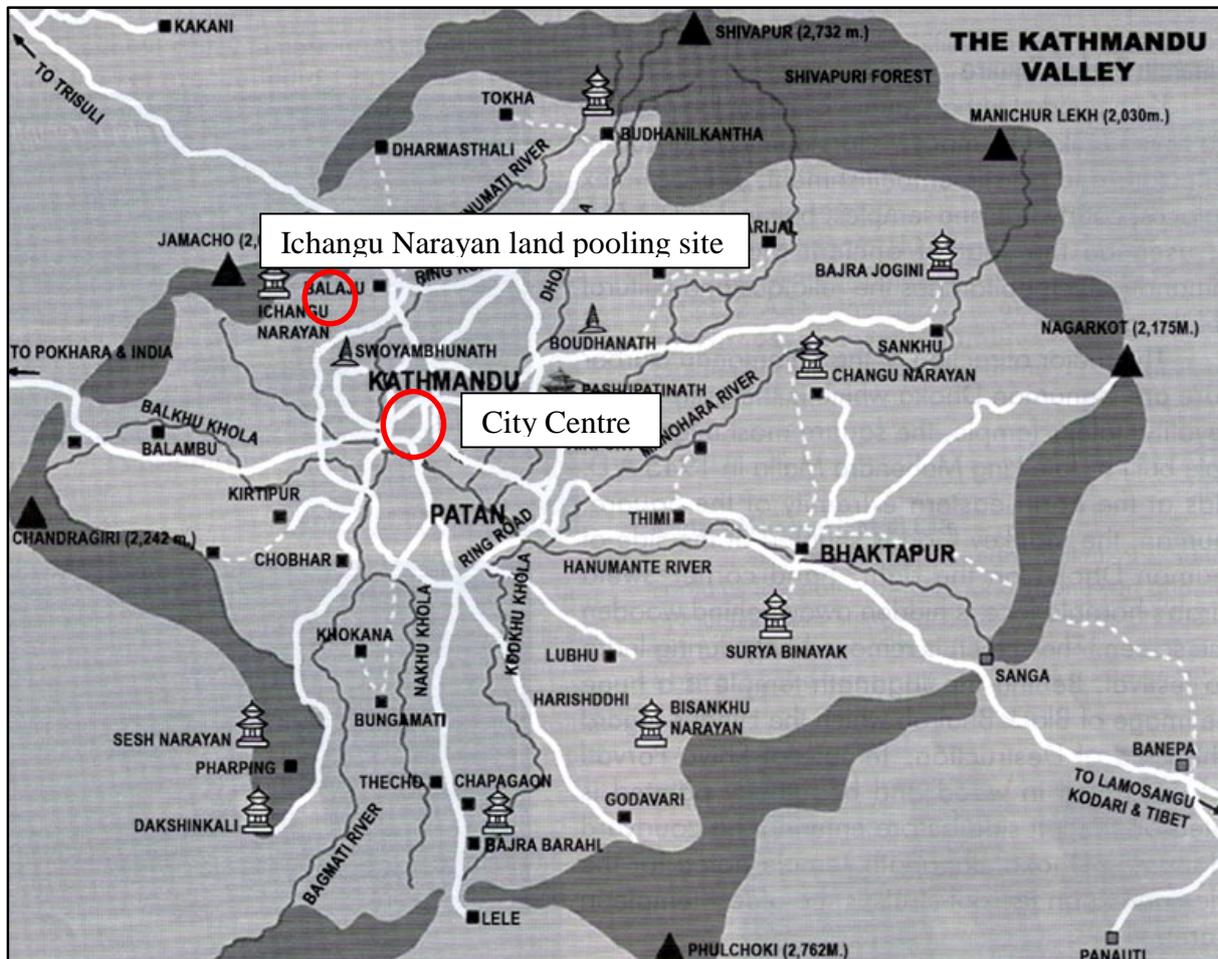
Table 2: List of land pooling projects

S.N.	Completed Projects	Area (Hectare)	On-going Projects	Area(Hectare)
1.	Dallu land pooling project	20.15	Bagamati Nagar land pooling	63.40
2.	Saibu-Bhaisepati land pooling project	28.09	Kamerotar land pooling project	45.80
3.	Gongabu land pooling project	14.35	Chai Maiti land pooling project	73.28
4.	Chabahil Gopi krighna land pooling	10.22	Manohora Phant land pooling	90.27
5.	Bagmati Phant land pooling project	10.02	Dhobikhola corridor land pooling	18.25
6.	Kirtipur I land pooling project	5.44	Tumucho Dugure land pooling	30.53
7.	Kamal Binayak I land pooling project	7.37	Shankhamul land pooling project	7.12
8.	Libali land pooling project	34.09	Dibyaswori land pooling project	28.14
9.	Lubhu land pooling project	13.68	Ichangu Narayan land pooling	30.94
10.	Sinchitar land pooling project	26.71	Saibu Nakhudol land pooling	17.96
11.	Naya Bazar land pooling project	42.74		
12.	Sinamangal land pooling project	46.51		
13.	Total developed Area	259.37	Total Area to be developed	405.69

Source: KVDA (2015)

This research focuses on Ichangu Narayan land pooling project. It is one of the 10 on-going land pooling projects of KVDA which is upon an area of 30.94 hectares as shown in table 2 above. The site is located about 7km North-West of Kathmandu as shown in the location map Picture 1 below.

Picture 1: Location of Ichangu Narayan land pooling



Source: Modified in *Of Cats and Curies* (2010)

1.2 Problem Statement

The present housing situation of Kathmandu valley remains inaccessible to the urban poor. Increasing land prices is making it more difficult for them to afford housing. More than 75% of the urban population does not have sufficient income to afford the minimum standards of 50m² of self-constructed house on 80m² plot in the outskirts of the city and 95% cannot afford to purchase a built property (UN-HABITAT, 2010).

The overview of global situation dealing with these problem leads toward an instrument called inclusionary zoning which enables the development of affordable housing within the other developments taking place in a community. Calavita and Mallach (2009, p.15) states that “Inclusionary zoning/housing programs are land use regulations that require developers of market rate residential development to contribute a small portion of their units usually 10 to 20 % for households unable to get it in open market”. This inclusionary provision is being practiced within the land readjustment projects in many countries like in Korea (Karki, 2004) and Town planning schemes in India (Sanyal and Deuskar, 2012). Nevertheless the situation in Kathmandu valley presents a different story.

Land pooling projects by government has been able to increase the market value of land from 300% to 600% (Karki, 2004). The major beneficiaries are the land owners and the government is able to capture the value through the services provided. Despite its popularity, it has not been able to provide affordable plots to the poor. Although there is the existence of cross subsidy mechanism in land pooling through means of requirement of a minimum of 10% of the reserve plots for the poor households, it has not resulted in the increase in housing supply for poor (UN-HABITAT, 2010).

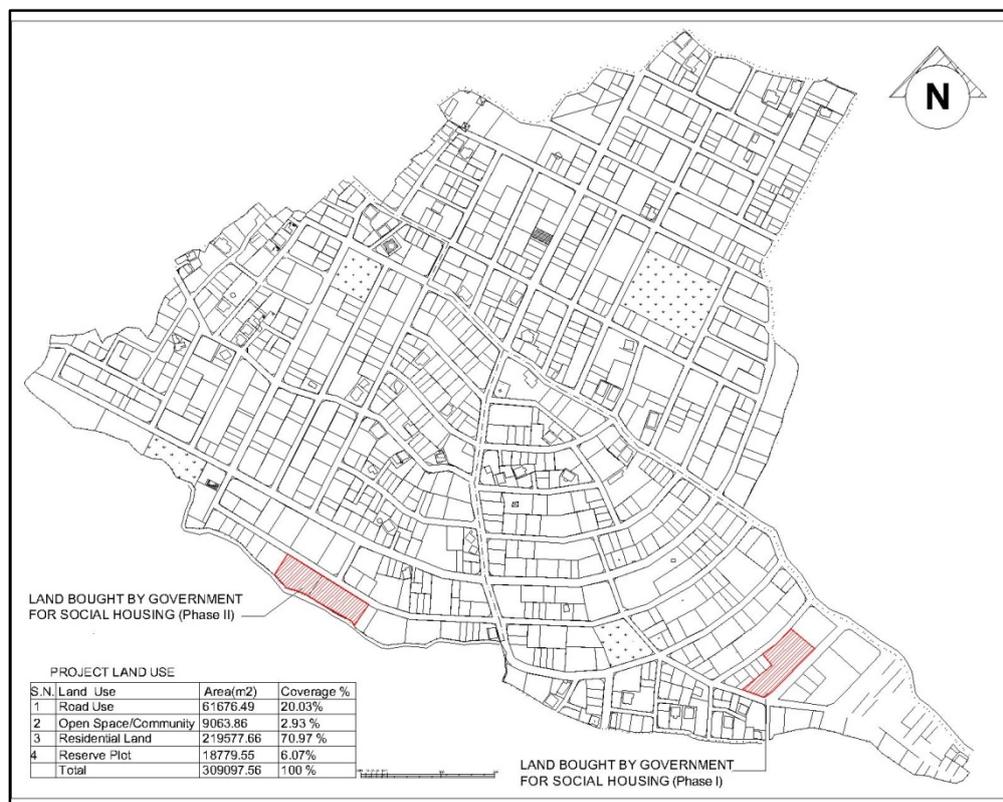
There is the provision for inclusionary zoning in Town Development Directives (TDD) 2005 of Nepal. Within the section 5.2 of TDD, there are different requirements of inclusionary zoning for different projects as shown in table 3 below. In case of land pooling projects, the allocation of low income plots could be “up to 10% of reserve plot”. Reserve plots are the land contributed by the land owners of the land pooling project for selling purpose to recover the cost of project. Therefore government can mobilize values in these projects to subsidize low income people by the land owners. However in Nepalese case, the tragic point is that the provision is not being implemented in any of the projects which otherwise could have solved many problems of affordable housing.

Table 3: Inclusionary zoning provision at Kathmandu

S.N	Type of projects	Obligation criteria of inclusionary zoning	Status
1.	Sites and Services	Minimum 10% of housing plots	Not being implemented in practice
2.	Land Pooling	Up to 10% of reserve plots	
3.	Land development by developers	10% of developed land	
4.	Housing and Apartment by developers	10% of housing floor area	

Source: (Town Development Directives, 2005)

Figure 1: Master Plan of Ichchangu Narayan Land Pooling Project



Source: KVDA (2015)

Icchangu Narayan land pooling project presents a unique case in Nepal. It is the only case in Nepal in which government has bought land in land pooling project for the construction of apartment building for low income people. Moreover government bought land in market rate instead of getting it as a provision given by the Town Development Directives (TDD) 2005. The two red shaded areas in figure 1 above display the areas which government has bought for low income groups. The area in south east corner was bought in first phase in 2010 and the area towards the south was bought in second phase in 2012.

Government bought 4026 m² of land from 18779.55 m² of reserve plots for social housing which means government bought 21.4% of reserve plots. Moreover if government has used the inclusionary provision as mentioned in TDD then it would have been the land owners who would have subsidized up to 10% of plots but now it became the case where government has subsidized the whole 21% plots. In town planning schemes of Gujrat, India land owners has to provide “up to 10% of developed land” to low income groups (Sanyal and Deuskar, 2012). However in Nepal’s case even though the provision is “up to 10% of reserve plots” which shows it is less in volume, it is not being implemented. This research in this context is carried out to examine the factors that hindered the execution of the inclusionary zoning provision in the Icchangu Narayan land pooling project, which the government for.

1.3 Research Objective

This research aims to explain the reasons for the abandonment of inclusionary provision of low income plots in the Icchangu Narayan land pooling project at Kathmandu. Moreover its objective is to identify how Nepalese legal system has recognised the inclusionary provision in land pooling and what are the gaps for its implementation. Furthermore in a larger picture, identification of the reasons that has hindered the inclusionary provision will help to overcome it and leads towards the goal of capturing values for getting affordable plots to low income group people.

1.4 Research Question

The main question for this research is as follows:

What are the factors that have influenced the abandonment of the inclusion of 10% low income plots in the Icchangu Narayan land pooling project at Kathmandu?

To answer the main research question, following four sub questions are formulated with justification.

1. What are the legal and the policy framework for the provision of 10% low income plots in land pooling projects at Kathmandu?

Before going into the implementation of the project it is important to understand the institutional framework for the operation of project. It explains how the inclusionary provision is institutionalised into the system, how much percentage of allocation could be asked, whether it is indeed mandatory or completely voluntary. Moreover this section is needed to identify how much the implementing agency can enforce.

2. How is the Icchangu Narayan land pooling project implemented?

It is important to know the implementation process of the project to identify if the process is participatory or not. It should be known about the stakeholders, funding mechanisms, how the project was initiated, and executed. Moreover it is to understand whether the process has flaws or not like whether it is being executed as per the legal norms.

3. What has hindered the government for incorporating the inclusionary provision in the Icchangu Narayan land pooling project?

The role of government is very important in this type of project as they are the implementing body. Therefore this sub question is essential to explain why government cannot comply with incorporating inclusionary provision in this project. It is necessary to identify their willingness and capability and its influence in implementing the inclusionary provision in Icchangu Narayan. However there may be the resistance by other important actors, the land owners for various reasons which need to be identified and explained for its influence on government. Further there may or may not be the favourable external factor like good market conditions to support the project which might have strong role in forbidding the provision.

4. What has limited the land owners from providing the inclusionary low income plots in the Icchangu Narayan land pooling project?

Besides government, land owners are the other key stakeholders in land pooling as they are the ones who is contributing land for the project. Therefore it is important to know their perspective towards the inclusion and how different factors influenced them towards discarding the provision. It is essential to explain whether they are afraid that the inclusion will affect their land values and how it affects their contribution of land. Moreover the influence of land market on land owners for inclusion also needs to be explained.

1.5 Significance of the study

Developed land from the land development projects of Kathmandu is accessed only to the elite group excluding the lower income people. There are lots of deficiencies in the supply of housing plots for the poor and this issue has been addressed in the National Shelter Policy 2011 and the National Urban Policy 2007 of Nepal. Further to increase the accessibility of the lower income group towards housing, NGO's working in this sector are demanding the allocation of certain percentage of share from the land development and housing projects of government and developers to low income people. However this provision is limited in the legal documents only, it is not being implemented. Therefore this research has importance in the way forward to check the gap between the provision in the papers and the implementation issue so that it will help in future to close the gap and promote the inclusionary process.

This research would be helpful to the government organisations like Department of Urban Development and Building Construction, Kathmandu Valley Development Authority and the line ministry towards the goal of affordable housing. This would be an important document for the NGO's working in this sector and the lower income group to solve the affordability problem. Moreover it would be relevant to the academicians who are interested in the theories and practice of land pooling and the inclusionary zoning.

1.6 Scope and limitation

The scope of this research work is limited to the land pooling projects of Kathmandu only. It does not consider the land developments from the private developers and the land brokers. Within the land pooling projects, this research focuses specifically on Ichangu Narayan land pooling project at Nagarjun municipality because it is the only case in Nepal in which government has bought land for accommodating low income people.

The research strategy used in this research is single holistic case study. Therefore the scope is limited within the single case and it has limitation of multiple generalizations. Furthermore time factor is one of the biggest limitations of this research as research has to be carried out within six months whereas data has to be collected within four weeks. In addition to this, data collection was done in a busy schedule of respondents as the field work period is the fiscal year ending time in Nepal. This has affected the collected data as respondents were busy at their respective work places and interviews were interrupted many times making it lengthy.

Chapter 2: Literature Review

This chapter discusses the concepts, theories, debates addressing different point of views of scholars, facts and findings about the inclusionary housing programs and land pooling projects so as to have understandings on what have been known so far regarding this research. This chapter is divided into four parts. First part 2.1 provides the rational and consequent justification for the public sector to capture the increment in values due to public actions and connects inclusionary housing and land pooling as a value capture tools. Then second part 2.2 discuss inclusionary housing starting from its introduction, how it is framed in legal and policy framework, other complementary instruments which could be tied with it and discuss it more as a land value recapture tool through rezoning. It further discusses about the economic effect of inclusionary housing over land markets to developers, buyers and land owners.

The third part 2.3 explains about the land pooling. Starting with its difference from most commonly used land readjustment it clarifies both are nearly the same except some difference in process. Then it talks about the implementation mechanism of land pooling, the public and the merit goods supplied by it and its characteristics upon which its success depends. Furthermore in economic analysis it discusses land pooling as value increment tool changing land uses which by its nature excludes poor whereby demanding some mechanism for inclusion of low income group. Finally in the fourth part conceptual framework is presented incorporating the knowledge from theoretical chapter so that the research question could be answered.

2.1 Land Value Capture: Rationale and Justification for government capturing values

Value capture is a mechanism which through the use of different instruments captures some or all of the increment in value of land created by public action. Within the scenario that cities are growing demanding heavy investments on infrastructure and there is the decrease in traditional means of revenue supply creating deficiency in fiscal budgets, it is gaining more and more popularity internationally as a source of revenue collection. However the question arises regarding the fairness to land owners for sharing the appreciation with society, whether government has rights to capture these increments and they have obligation for compensation when there is the decrement also (Alterman, 2012).

There is the debate between conservationist who fight for private property rights and socialist who argues for social function of private property. Conservationist like Locke and Bentham argued that government should have strong protection over real property rights as land owners are the one who would invest upon it and maintain it more properly than the public sector. Furthermore today's scholars view is also based on conservationist view that only in case of unrestricted regulation, optimum utilization of land can only be achieved through market forces. Nonetheless the opponents challenge social obligations over the property rights. Moreover they argue that social and environmental obligations hold true even when property rights are protected by constitution (Alterman, 2012).

According to Ingram and Hong (2012, p.4) "land value is determined by public investment in infrastructure and social services, changes in land use regulations, population growth and economic development, private investments that increase land value, original productivity of the land". The value of original productivity of land for which land owners have paid and the value increments due to private land improvements should remain to the owner. Moreover land value increments by public actions belong to the city and therefore it should be captured.

Also for the simple assessment of values, most value capture policies concentrate on change in values due to some government actions over a certain period of time (Ingram and Hong, 2012).

Henry George's argument as mentioned in Fainstein (2012, p.21) "increase in value of land should accrue to society as a whole and not to individual owners as it was collectively created value arising from the use of land". Therefore profit should go back to the public and should be equitably distributed. Value capture is to mobilise the unearned increment in values by public decisions for the betterment of the whole society rather than concentrating it to the few elites. The concept is fairness in distribution of windfall gains. Hence the benefits provided by the government to individual property owners should be equitably distributed among all the community members (Smolka, 2013). Further it aims to recover the costs of services and enable local authorities in revenue generation. Nevertheless this also depends on how the property and the property rights are put into the legal, philosophical, political and constitutional framework of a country (Booth, 2012).

Value capture instruments ranges from common public land leasing and property taxation to all other fees designed to pay back the society like betterment charges, impact fees, exactions in the form of inclusionary zoning and planning obligations. It could even be the value mobilising instrument like land pooling/readjustments. However the objective of all is capturing the unearned profit from private owners due to the public actions in order to uplift the public goods. Moreover the challenge to this is the effective implementation (Smolka, 2013).

2.2 Inclusionary Zoning

2.2.1 Introduction

Inclusionary zoning/housing is a public policy to create social integration and affordable housing through the planning system. It refers to programs, regulations or laws that force the market driven developments to provide affordable housing in below market price to households unable to get it in market rate (Calavita and Mallach, 2009). These could be provided either in cash or in kind, and within or outside the development boundary. Furthermore inclusionary zoning provides the opportunities to public sector to improve their scarce resources and to capture some part of the wealth being created in the real estate market for public purposes.

2.2.2 Legal and Policy Framework for Inclusionary Zoning

Inclusionary zoning practice depends upon how the system is institutionalised within the legal and policy framework of the city or the country. Further it depends on how government puts obligation to the developers for the inclusion of people who cannot afford housing in an open market.

Legal Provision of Inclusionary Zoning

The provision of inclusionary zoning has not always been clear in regards to how it fits legally into the regulatory framework of the government. It may be because it will have different implications. If a developer is imposed inclusionary zoning as an exaction then there should be the proportionality between the impact caused by the development and the affordable plots need. Nevertheless if it is treated as a land use regulation then no such relationship is needed and it should be within municipality's power to regulate land for public purpose (Calavita and Mallach, 2010).

In the United States of America and Canada inclusionary zoning is addressed within the framework of land use regulations of the state or province as per the power given by the decentralisation. Spain and Ireland has mandatory provision for Inclusionary zoning by national legislation. Also in India, Malaysia, Israel and Colombia inclusionary housing forms the part of policy framework to address the issue of housing affordability. Moreover inclusionary policies have now been a global phenomenon and different countries have adopted different strategies within the diverse socio economic and political situation (Calavita and Mallach, 2010).

Inclusionary percentage

Inclusionary ordinances specify the allocation of affordable units known as set asides for a specified project which is usually mentioned in percentage. The percentage could be as low as 5% and could be high above 25%. Usually in the United States the suburban ordinances requires 15% to 20% to be allocated as set aside for affordable housing whereas the urban ordinances requires lower percentages. For example in Chicago, Boston and Denver this percentage is 10 whereas in Baltimore this percentage could be more if the program is subsidised (Calavita and Mallach, 2010). Similarly Norwegian law allows the public housing agency to purchase up to 10% of the newly developed units to be allocated for low income renters. In two cities of Amersfoort the percentage of social housing is high, 30% in Vathorst and 45% in Kathenbroek. Housing plan for South Australia and Australian Capital Territory has adopted the policy of 15% affordability. In the state of Haryana, Gurgaon there is the provision that developers have to allocate 20% of the plots to economically weaker sections and in case of multifamily development 15% should be affordable housing (Mallach, 2010).

As per Gujrat Town Planning and Urban Development Act, in Town Development Scheme (TPS) up to 10% of the pooled and the serviced land must be allocated for low income people but evidence have shown that in the TPS of Ahmedabad Urban Development Authority, this percentage of provision for low income is less than 3% (Sanyal and Deuskar, 2012). However the percentage allocation differs from place to place based upon various factors, the portion of set aside is usually between 10 and 20% of the new development (Calavita and Mallach, 2009).

Mandatory Inclusionary programs versus Voluntary programs

In framing the inclusionary zoning programs there is always the debate whether it should be made mandatory or voluntary. Mandatory programs give the developer obligation with every new development to allocate some plots as affordable housing whereas voluntary programs are based upon incentives to encourage inclusionary provisions (Lerman, 2006). Within the scenario the question arises that whether the developers would be encouraged for the provision with more incentives without any mandatory norms and whether the mandate mix with incentives would make it more possible.

Recent and historical experiences and research have shown that mandatory programs produce more affordable housings and are successful (Brunick, 2004, Lerman, 2006). For example in Cambridge after 10 years of failure of voluntary provision, adoption of mandatory ordinances made the program successful. In contrary voluntary programs could also be successful but only with the subsidies. The problem then arises is about the scarcity in resources. Still these could be successful if it is induced as if mandatory and if it is made highly attractive within the broader community policy. For example in Chapel hill, North Carolina, town council and its staffs has so carefully promoted the program that the developers regardless of rezoning request approach the planning commission with the affordable housing schemes within the project and it has worked like mandatory programs (Brunick, 2004). Nevertheless the

realisation of inclusionary housing programs has weighted more in the mandatory side and it is successful in case of housing provisions to low and very low income group as well. In case of very low income housing, mandatory provision is tied with the incentives like density bonus flexible planning and other offsets. Moreover mandatory provision is often tied with density bonus so as to avoid regulatory taking challenge as well (Lerman, 2006).

The reason for success to mandatory provision is because it is more reliable and predictable to the developers and to the community. They will in this case be known about the market conditions. Conversely in case of voluntary provision, there is the risk of fairness and developer has to undergo negotiations depending on political connections (Brunick, 2004). Nonetheless one drawback of mandatory programs besides resistance from developers is that it requires government to have strong enforcement mechanisms like financial sanctions. Also in case of voluntary programs incentives have to be borne by the government and it can burden the environment and infrastructure in larger picture (Lerman, 2006).

2.2.3 Complementary Instruments for Voluntary Inclusionary Zoning Programs

Offsets and incentives

Offsets and incentives are provided by the public sector to the developers through flexible planning so as to entice them for affordable zoning. Moreover it would either reduce the developers cost or increase their return. The commonly used incentives and offsets are as follows.

- Density Bonus and height bonus
- Fee waivers and exemptions
- Land use regulatory changes like parking reductions, open spaces, setbacks etcetera.
- Expedited permitting

The most commonly used incentive is the density bonuses in which the public sector allows the developer with extra floor area ratio or extra units say per acre of area compensating developer's provision for inclusionary zoning. It is based on the principal as compensation to taking issues that additional profit from additional market rate units will offset the cost of below market units. Other incentives could be fiscal benefits like fee waivers that reduce developer's cost and tax abatement to low incomers that increases developer's return as they can now them charge more. Also it could be through the flexible planning systems of reduction in parking, open spaces and setbacks etcetera or fast track permit systems (Calavita and Mallach, 2009, 2010).

Scholars argue that without compensations inclusionary zoning takes the possession of constraint or exactions to new development (Coyle, 1994 as cited in (Calavita and Mallach, 2009) and there are many evidences to court cases regarding this issue. Therefore even in the absence of legal provision for such incentives, local government adopt these. Nonetheless the question arises who actually pays all these costs. Moreover many of these cost incentives and offsets falls over the public sector either directly or indirectly (Calavita and Mallach, 2009).

Forbidding the school of thoughts presented by different scholars towards the view that inclusionary housing should be tied with the offsets and incentives to create a fair position for the developers, another sets of view presents it as a land value recapture tool. As Zoning and land use plan has to be updated constantly to meet the demands of society, it can come up as a tool to recapture the increment in land values whenever public sector took action like rezoning and land use changes. Furthermore increased land values become the incentives as compensation for the developers for this inclusionary provision (Calavita and Mallach, 2009).

2.2.4 Inclusionary Zoning: An indirect instrument of land value capture

Indirect instrument of value capture does not intend to capture values for oneself; rather it mobilizes the value for some public purpose which may be either in cash or in kind. Through indirect instruments, government with their power of regulation ask for some services from land owners and developers in exchange of some additional development rights, fast track permissions, flexibility with the regulations etcetera. All types of developer's obligation, exactions, impact fees, planning obligations falls under this (Alterman, 2012). Hence inclusionary zoning as a developer's obligation falls under this category of indirect value capture instrument and it has to meet certain preconditions to be implemented successfully.

Preconditions: Political will and Government's Capability

As inclusionary zoning ordinances have to come within the legislative process, it will have the influence of the political factors. Three parties: local residents, Non-profit organisations and private developers have influential role in adoption of these programs as they have different preferences over the government intervention through policies and regulations. The four preconditions for the successful implementation of the indirect instrument as mentioned by Alterman (2012, p.778) are as follows.

- Government should have well trained staffs and capability to deal and negotiate with the developers rationally like having some pre-set formulas to calculate the impact. Moreover in case of inclusionary zoning, government can analyse to what extent the regulation could be fulfilled by developers or which complementary instruments is needed for its effective implementation.
- Government should have the knowledge about the land market and monitor the fluctuations in land prices so that they can counter argue the developers that inclusionary zoning is not raising the value for market rate buyers.
- Government procedure for negotiating exactions should be transparent so as to avoid legal challenges. Even though there is strict application of mandatory inclusionary zoning programs, transparency is needed to check the implementation problems.
- There should be high level of trust for the government in order for it to be successfully. However countries which undergo high corruption should not adopt indirect instruments.

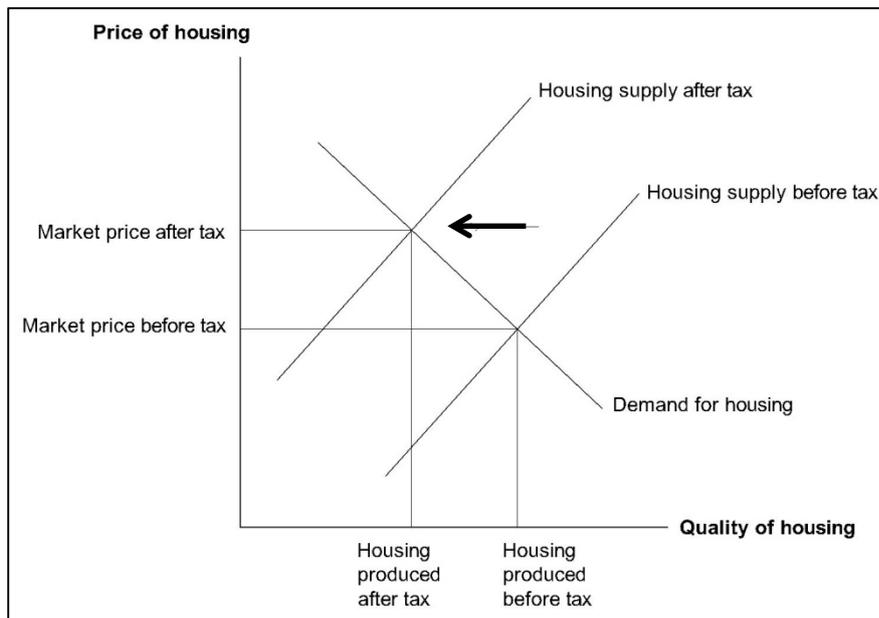
2.2.5 Good market: An important condition for inclusionary zoning but who actually pays for it? Is it a punitive tax?

The incentives and offsets offered to the developers are directly or indirectly borne by the public sector (Calavita and Mallach, 2009, 2010). Density bonuses and flexible regulations will affect the infrastructure services and quality of life creating pressure on public sector for the improvement. Fee waive which otherwise could be the revenue for local government for on-going services will be no more which in turn will create extra burden for other developers and the tax payers. In addition to this, expedite planning process will either delay many other development projects or demands more efficiency in public officials. However in all the cases public resources is being used to fill in the developer's pocket (Mallach, 2010). It could even be said that these processes are not much different than the direct capital subsidy.

For the good performance of inclusionary zoning programs, there must be good market demanding high income units so that affordable units would get subsidized through it (Mallach, 2010). Nevertheless there is the controversy whether the developers would be able to pass the cost of below market units to market rate buyers or not. Economists have presented two views for this. First in case of elastic market, developer would not be able to

pass the cost to the home buyers and they have to compromise their profit and secondly if at the time of regulation, developers have not bought the land then they would definitely bargain with the landowner for this (Calavita, Grimes, et al., 1997). Therefore inclusionary zoning programs are debated as punitive tax upon building new homes and developers would not be able to pass it to market rate buyers which results the decrease in their profit margins (Powell, B. W., 2013). However as per Bento, Lowe, et al (2009, p.9) the economic effect of inclusionary zoning is same as effect of tax on housing as shown in Figure 2 below. As the cost of development increases with the increase of discounted units, developers have to raise the price of market rate buyers for compensation of affordable housings. Furthermore it also decreases the supply of housing.

Figure 2: Economic effect of Inclusionary Housing



Source: Bento, Lowe, et al (2009)

It could be said that in a tight housing market developers would be able to pass the cost to the buyers and in an oversupplied market they would be able to pass it to the original land owners as in case of any other exactions (Evans, 2006). However there is the consensus in the literature that in the long run, this cost would be passed to the landowners as a rational developer would have already charged the buyers the prices that market can bear. Also it is not unfair if land owners have to bear the cost because the increase in value is the unearned income for the landowners as they did nothing for its improvement (Calavita, Grimes, et al., 1997, Calavita and Mallach, 2009).

Inclusionary zoning could be provided inside and outside of the development area as guided by the policy provisions. However the emerging preferences to gated communities show that affordable housings are being provided outside the development rather than social integration.

2.2.6 Justification for gated community

Atkinson and Blandy (2005, p.178) define gated community as, “a walled of fenced housing development, to which public access is restricted, characterised by legal agreements which tie the residents to a common code of conduct and usually collective responsibility of management”. The reason for this walled community as argued in many developing countries is for security (Webster, 2001, Atkinson and Blandy, 2005). However the question is whether

the desired exclusion and inequalities as created by those who have the ability to pay for security and privacy is reasonable or not. Moreover there are many other good ways to deal with security. Further the other reasons for walled communities are the desire to control their own residential environment, to have their own desired services, exclusion and fashion (Webster, 2001).

2.3 Land Pooling

2.3.1 Land Pooling versus Land Readjustment

These are basically the land consolidation projects named differently in different countries. It is known as land readjustment in Japan and South Korea, land consolidation in Taiwan and Indonesia, land pooling in Australia and Nepal and re plotting in Canada. Despite the name, the aim of such projects is unifying the landowners in partnerships, subdividing the irregular plots into regular, servicing them, returning the developed plots to the original land owners and selling some plots for cost recovery. These are different only in some steps of procedure regarding the ownership (Archer, 1992, 1994). The difference is that in Land Pooling the ownership of all the lands subject to redevelopment is transferred from land owners to the land pooling agency for merging and sub division which then returns back the individual plots to the original landowners after development where as in land readjustment projects land development agency with the rights to design, sub-divide and service the lands only notionally assembles it (Archer, 1992, Yanase, N., 2013).

The basic definition of land pooling is that it is a technique of converting rural land into urban providing the city infrastructure (Yilmaz, Cagdas, et al., 2015). It is a technique of managing and financing land development projects whereby a group of landowners of undeveloped land are unified in a temporary compulsory partnership for the process of re plotting and subdividing the land with the provision of infrastructure and open spaces along with the allocation of some reserve plots for sale purpose aiming the cost recovery of project. Each landowner gets back his/her land, smaller in size after his/her share of contribution but of high market value. Moreover it redevelops land from out-dated form to highest and best use enhancing the capital to landowners and community (Hong, 2007).

2.3.2 Implementation of Land Pooling projects

Land pooling is implemented with the following steps as mentioned in Archer (1992, p.158).

- Approval of scheme
- Arrangement of loan
- Survey of land
- Design of engineering works
- Infrastructure construction
- Land subdivision
- Sale of reserve plots for cost recovery
- Repayment of loan
- Distribution of land parcels to the land owners
- Dedication of roads etcetera to local government

However all the above mentioned steps could be grouped under four components for implementation which could be modified by the policy makers as per context (Hong, 2007).

- Project Initiation

Land pooling projects could be initiated either by public or private entity depending upon the provisions in their own context (Hong, 2007, Yilmaz, Cagdas, et al., 2015). A project is

instigated when a public agency or private party initiates the idea of land pooling over a certain area forms an agency with the representatives from local land owners, government and may be developer. Moreover if the plan prepared by this agency sounds technically and financially feasible after consequent meetings and improvements, then it goes to the affected land owners for their support. It also requires arranging short term loan to finance the infrastructure costs which is later recovered after the sale of reserve plots (Archer, 1992).

- Community support development

To integrate numbers of land owners with different interest is a challenge in land pooling projects. Numbers of public hearings are conducted by the agency for public support with lots of negotiations. Further the committee has to present a preliminary measure of the ratio of return after the land pooling as the investment of landowners would be returned in the form of serviced land not in monetary value. The question arises that what motivates the property owners to join the scheme and handover their land to agency and what benefits would lead towards their participation? These projects would suffer from lots of holdouts and to deal with this in most countries there is the provision of super majority vote like in Japan 66%, Taiwan 50%, then the remaining would have to join it forcefully. Furthermore reason for super majority is to allow the community to decide whether the project would be beneficial for their community or not (Hong, 2007).

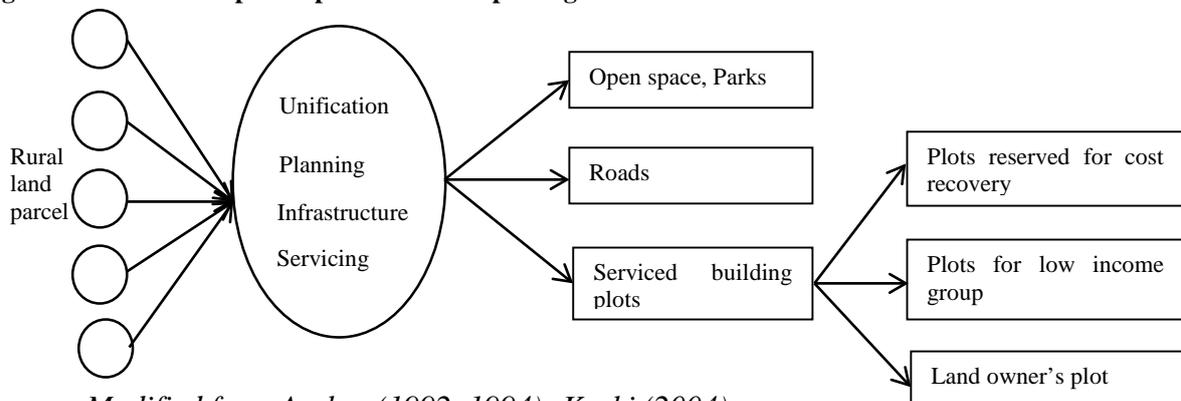
- Land sub division and servicing

The agency has to prepare the master plan of the project area after the development with the consent of land owners after subsequent hearings. Certain percentage of the land would be devoted for infrastructure and amenities like park and certain percentage would be kept as reserve for the purpose of selling to recover the project cost. Not only infrastructure and amenities, but the increment in values could even be captured to fulfil the social need like subsidizing low income housing (Doebele, 2002 as mentioned in (Yilmaz, Cagdas, et al., 2015). Additionally a well-planned land pooling project is cost recovered project (Doebele 1982, 2002, Larsson 1993, 1997 as cited in (Hong, 2007).

- Land Reallocation

After the land is readjusted, market value of the land is accessed and each land owners would get their land back small in size but high in value. Since the owners have contributed their land for infrastructure and services it is reasonable that they can enjoy the benefits from increase in value (Hong, 2007). Finally the loan for infrastructure services is paid through the revenue generated by the sale of reserve plots through auction and there after the agency is dismissed

Figure 3: Land Development process in land pooling



Source: Modified from Archer (1992, 1994); Karki (2004)

2.3.3 Conditions for efficient application of Land Pooling Project

The conditions for successful application of land pooling project are legal provision, cost recovery mechanism, equity in costs and benefit sharing, inclusion of infrastructure construction costs in land readjustment process, planning choice, participation of landowners, management and technical capability and quality of cadastral maps (Turk, 2007, 2008). Moreover as stated by Mittal (2014, p.316-317), “legal tool or regulatory framework, strong political and public support and favourable real estate market are the prerequisites for the success of land pooling projects”. Leadership plays an important role to convince and communicate the land owners and it is also vital for administrative and legal approvals. Furthermore the willingness of implementing agency to deal with all these rigorous process is very important (Mittal, 2014).

- **Legal structure**

For the successful application of land readjustment projects, there must be some laws and regulations. Legal structure is needed because these projects intervenes the land ownerships and the property rights of land owners. Further regulations are needed to create standard implementation procedures and principles for maintaining transparency and collaboration in these projects (Turk, 2008, Mittal, 2014).

- **Participation by landowners**

Land Pooling is considered as bottom up approach of planning as the development process takes place with the consent of land owners who are contributing land for development within an area. It is actually a process where by people and government join hands to cope with the growing situation of urbanisation (Sorensen, 2000). Therefore the foundation of these projects lies in its cooperative and participative aspect where coercion is the last option (Hong, 2007). However there are the possibility of many reluctant landowners and the holdouts obstructing the project. Therefore there needs some special legislation like the power of eminent domain or compulsory purchase and the supermajority vote which leads those landowners either to join or leave the project (Archer, 1992, Hong, 2007).

Generally land owners oppose for two reasons. First when the deduction of land for contribution has increased. Moreover for small plots holders if the deduction is high then it would be difficult for them to get the plots. Further second type of opposition is regarding the base of distribution. There is conflict on locations if it is different than the original.

- **Equity in cost and benefit sharing**

Transparency and fairness are the two principles needed in land pooling projects for sharing costs and benefits among the land owners, public agencies and the community. However such share may not be equal among these stakeholders (Turk, 2008). In these projects, costs and benefits are shared equitably among the landowners of the project area (Archer, 1992, 1994). Therefore if land pooling project has to produce low income plots then it burdens less to the landowners than in case of private developers. It is because in land pooling the whole costs is divided among many land owners which would be less in share than the individual developer. Nevertheless due to nature of project that land owners have to contribute their land upon which increment in value takes place after development, it is inevitable that some landowners will benefit more than others creating dissatisfactions and local conflicts (Sorensen, 2000).

- **Planning**

This has to do with the selection of project size as from literature it is found that the small size and medium sized projects are more successful. This is because it becomes easier to

convince land owners in small areas than in large areas. Also planning has to be considered so as to link the land readjustment projects with the master plans (Turk, 2007, 2008).

- **Inclusion of infrastructure construction and costs**

Construction costs of infrastructure is included within the land pooling projects in some countries and in other countries, it is excluded. In case it is not provided by the land pooling projects, it becomes burden to the local government causing the delays in development. Moreover the construction of infrastructure completes the project and provides the more serviced land into the development (Turk, 2007, 2008).

- **Technical Personnel and management**

Availability and experience of technical personnel and managers plays an important role for the efficient application of land pooling projects (Karki, 2004, Turk, 2007, 2008). This is especially needed to convince and negotiate with the land owners.

- **The structure of land ownership**

The objective of land pooling is to provide serviced land of regular shape with clear land ownerships. However it becomes difficult if the lands with co-ownerships enter into the process and land pooling does not convert into sole ownerships. In Taiwan and Turkey this component had affected the efficient application of land pooling projects (Turk, 2008).

- **Quality of cadastral map**

Data available from land registration office should be accurate so as to avoid technical difficulties. This could cause delay in the process and the project could not move forward without correcting the existing mistakes (Turk, 2007, 2008).

- **Cost Recovery affecting land owner's contribution: Depends upon political will and government's capability**

Land Pooling is a self-reliant form of land development for the provision of urban infrastructure as the costs are shared among the landowners who share the benefit after development (Sorensen, 2000, Yilmaz, Cagdas, et al., 2015). One of the factors showing the effectiveness of these projects is the cost recovery and the reason why public entity prefers this is because they do not have to bear the burden of infrastructure services within the land pooling project area (Turk, 2008). For this there should be trade-off between the cost recovery scheme and the land owner's participation as it will affect their percentage of contribution. Moreover higher the contribution, lower the returned plot size.

According to Hong (2007, p.23) "Land readjustment projects can be self-financing only if the responsible agency can resolve the inherent trade-off between encouraging property owner's participation by reducing their land contributions to the project and recovering the full costs of local infrastructure by reserving more land for public uses and sale". Any increase in land contribution makes it less attractive among land owners. Furthermore only a politically strong government agency that is conducting these projects can make enforcements on large contributions like in Seoul up to 70% contribution is seen (Sorensen, 2000, p.60). However there are thoughts among researchers that there should be some government subsidy to encourage the land owners (Karki, 2004). To assist the cost recovery, procedural expenses in some countries like Germany and Turkey are governed by the budget of local government. Support for procedural expenses strengthens the cost recovery mechanism of land pooling projects (Turk, 2008).

Besides the above mentioned conditions within the process of land pooling, its success also depends upon the external factor like the market conditions in which it is operated.

2.3.4 Active land market: An important precondition for Land Pooling

One of the important preconditions for the success of land pooling projects is the need for growing city with rising economy, growing demand for serviced land and active land market (Mittal, 2014). These projects are the value increment projects changing the land uses which converts the low valued agricultural land into the more marketable urban lands (Sorensen, 2000, Mittal, 2014). Moreover land owners are more attracted and encouraged upon these projects that there would be the significant increase in the land values with the provision of urban infrastructure even with the exchanged small adjusted plots (Archer, 1992, Smolka, 2013). Without this condition of good land market, land owners will not have any incentives to contribute their land in land pooling. However land speculation and lots of holdouts is experienced within the area in expectation of increment in future values (Sorensen, 2000, Karki, 2004) excluding poor from the land market.

2.4 Effect of land pooling on the affordability of low income group

As explained above in section 2.3.4 land pooling converts the low valued agricultural land into high value urban plots with all the necessary infrastructure services (Sorensen, 2000, Mittal, 2014). For the reasons that land owners have not made cash investment in developing their land and land is considered as a saving and investment instrument in many countries, there is little incentive to develop land with built-up forms or sell land (Sorensen, 2000, Yomralioglu and Nisanci, 2005). Therefore this has led towards slow building development in these areas, increasing holdouts and land speculation for the anticipated rise in land prices. For example in case of Nepal, plot speculation has been a crucial issue in land pooling projects and lots of land is found vacant in many of these projects even after many years of project completion (Karki, 2004). This implies that conversion of rural land into urban with the infrastructures does not necessary mean the increment in the supply of serviced land into the land market (Sorensen, 2000). Therefore this phenomenon is excluding the poor and they do not have access to it.

As land pooling is designed to increase the land values, the poor would often be unable to afford these improved lands (Inoue, 1985, p.21 as cited in Sorensen, 2000, p.60). Since there is not any incentives for land owners to keep the land prices low and avoid speculation, land pooling projects has been criticised for not being able to reduce the housing deficiencies of low income level (Yomralioglu and Nisanci, 2005). Nevertheless excluding poor from the land market is not the policy goal of land pooling. In order to avoid the exclusionary nature and to promote the social and economic objectives of land policies, land pooling projects should be enhanced to accommodate low income group into the project (Yilmaz, Cagdas, et al., 2015). Furthermore these projects have the potentials to capture socially created values to create social goods like affordable housing.

2.5 Value Capture through land pooling

As discussed in section 2.1.1 it is rational to capture the values of land and property as a result of public investment. There are many instruments designed for the purpose of value capture, among which land pooling is the one which captures the values and mobilises it within the same area to recover the cost of infrastructure and services provided. Therefore it becomes easier for government to finance the development and fulfil its responsibilities as it captures the increase in development gains. Moreover government has to finance for goods which market fails to provide and two arguments for government intervention are the public good arguments and the merit goods argument. Public goods are the goods which are non-excludable and non-rivalries in the sense that non payers should not be excluded and the consumptions by one do not reduces for other. However merit good argument is basically for

equity that certain goods should be accessed to everyone regardless of their ability and willingness to pay (Batley, 1996). In addition to this land pooling has the potential that government can capture the values for these public and merit goods.

2.5.1 Value capture for Public goods (infrastructure)

Land pooling converts the entire low value agriculture land into high value urban plots with all the necessary infrastructure services (Mittal, 2014). Since due to government project, the land value has risen, it is rational that government captures some of the increments in values. Therefore government captures it through land owner's contribution for public goods and the reserve plots which are sold to cover the cost of infrastructures. However the captured value is used inside the project to finance the infrastructure. In land pooling, land owners participate to urbanise their neighbourhood by their contribution of land for public goods (Sorenson 2000). Public goods supplied by the land pooling projects are the infrastructure services like roads, water, and electricity etcetera and open space like parks. Therefore through land pooling government captures the increment in land values through the finance of infrastructures. Infrastructures are financed by the land owners and the public land like parks and land contributed by land owners for roads goes to the ownership of government (Krabben and Needham, 2008).

2.5.2 Value capture for merit goods (affordable housing)

Besides infrastructure services, land pooling projects has capacity to capture additional values through the social housing projects by supplying land for low cost housing (Turk, 2008, Yilmaz, Cagdas, et al., 2015). This is important to overcome the poor from the risk of being squeezed out of the land market as explained in section 2.4 above. Moreover affordable housing is a social good and merit good as people to be housed is based on their need and it cannot be solved attained if left to free market forces only (Squires, 2012). In Korea, land pooling projects sets aside some land for housing low income people (Sorensen, 2000). Likewise Town Planning Scheme (TPS) of Gujrat, India which has many fundamental similarities with land pooling is admired for providing land to low income groups. Between 2004 and 2009 it has provided more than 11000 houses for poor on land obtained from TPS. However even though these projects have potential to capture up to 10% of the serviced land, government is able to capture only less than 3% (Sanyal and Deuskar, 2012).

According to Turk and Korthals Altes (2010, p.329) land pooling can be designed with five different approaches for the provision of low cost housing like selling land in a reduced price to agencies producing affordable house with cross subsidy from higher rate market buyers, purchasing some share of land by agencies producing low cost housing before the project starts, allocation of surplus from increment in land values for affordable housing, using some landowner's plot for multifamily unit construction to house the low income group and the fifth one is increasing the contribution from the land owners. Therefore land pooling projects has much potential to capture values for affordable housings but there has to be good implementation mechanisms and it varies as per the different factors of the context.

For value capturing mechanism, land values before and after the land pooling is determined and the increment in values is fully or partially captured by the public sector basing upon the legal and the policy framework (Yilmaz, Cagdas, et al., 2015). It could even be said that the increment in value is mobilised within the project area for the benefit of society. However it also allows the land owners to enjoy the appreciated values which are also fair as they are the one who make the contributions of land and took risk as well (Hong, 2007).

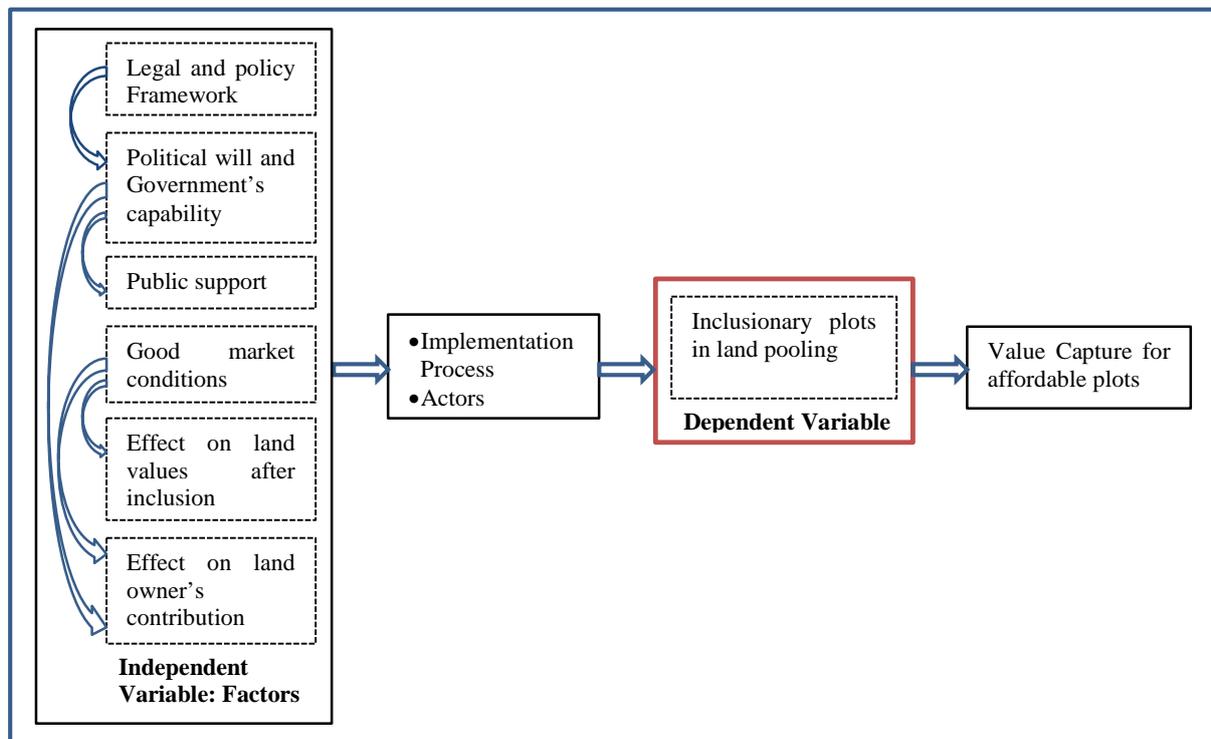
2.6 Conceptual Framework

In this section, summaries derived from literature review are incorporated to show the inter relationships that is to be used in this research. The concept of affordable plots as a merit good to be supplied from government is identified. For this, government’s intervention through the use of inclusionary zoning in land pooling projects is justified to capture the unearned increments from land owners. However the achievement of this goal falls back when it comes to effective implementation.

Literatures present that different factors which are independent variable govern the implementation of inclusionary zoning and the land pooling which is dependent variable in this research as shown in figure 4 below. However for the inclusion of low income plots within land pooling projects, only six factors which are common as well as important for its implementation are taken into consideration. Moreover two of the factors, political will and government’s capability and good market conditions are the prerequisite conditions of both inclusionary zoning and land pooling.

The achievement of inclusionary provision is determined by the institutional framework that how it is put into the legal and policy context. Inclusionary zoning being the indirect value capture tool; it requires strong government capacity and political will to negotiate for its implementation. Further this factor also plays an important role in land pooling to negotiate and convince the land owners to contribute more land. Since inclusionary zoning in this context is an obligation to land owners under land pooling project, this provision will affect the contribution of landowners. Therefore it cannot be achieved without the support from landowners. Land pooling brings more serviced land into the market and market decides the values of developed plots. However the inclusion of low income plots might distort the market of new urban plots. The conceptual framework for this research is presented in figure 4 below.

Figure 4: Conceptual Framework



Source: Author (2015)

Chapter 3: Research Design

3.1 Operationalization

Operationalization of the key concepts in the conceptual framework is done so as to develop the theories into doable empirical research. Definitions to the key concepts are derived from the literature relating it to this research work. Moreover the concepts are unpacked into the variables which are further measured through measureable indicators.

3.1.1 Definitions of concepts

The main concepts of this research are Inclusionary zoning, land pooling and the factors influencing the implementation of these projects. All the other concepts included here revolve around these key issues. However the concepts used in this research are defined below.

Inclusionary Zoning

Calavita and Mallach (2009, p.15) defines inclusionary zoning as “ programs, regulations or laws that force the market driven developments to provide affordable housing usually 10% to 20% in below market price to households unable to get it in market rate”.

Land Pooling

It is a technique of managing and financing land development projects whereby a group of landowners of undeveloped land are unified in a temporary compulsory partnership for the process of re plotting and subdividing the land with the provision of infrastructure and open spaces along with the allocation of some reserve plots for sale purpose aiming the cost recovery of project (Archer, 1992, Karki, 2004).

Legal and Policy framework for inclusionary plots in land pooling

It depends on how government put obligation to land owners for the inclusion of low income plots through the laws and regulations which is either mandatory or voluntary. However the allocation of percentage of inclusion is usually 10% to 20% (Calavita and Mallach, 2009).

Implementation of land pooling

Land pooling could be broadly implemented within the four components of project initiation, community participation, subdivision and servicing of land and land reallocation (Hong, 2007).

Factors influencing the inclusionary provision in land pooling

Among the list of factors, the important ones affecting the implementation of inclusionary plots in land pooling are legal and policy framework, political will and government’s capability, land market conditions, public support, land contribution and land values (Sorenson, 2000, Turk, 2007, Mallach, 2010, Alterman, 2012, Mittal, 2014).

The variables derived from these concepts are measured through the indicators to answer the research questions. The questions for the data collection are all based upon these indicators. Moreover the indicators are measured through different primary and secondary data using different data collection methods as stated in table 4 below. The operationalization of the key concepts based on each sub question of this research is presented in table 4 below. However same variables are used for answering sub-question 3 and 4. Later on after analysis, factors affecting the government and the land owners have to be identified independently.

3.1.2 Operationalization of concepts, variables and indicators

Table 4: Operationalization of Concepts

Main research question: What are the factors that have held the implementation of the inclusion of 10% low income plots in the Icchangu Narayan land pooling project at Kathmandu?				
Research Sub Questions	Concepts	Variables	Indicators	Data source
1. What are the legal and the policy framework for the provision of 10% low income plots in land pooling projects at Kathmandu?	Legal and policy framework for inclusionary plots in land pooling	1. Legal Provision	1. Levels of regulation (Constitution, Acts, regulations, directives) 2. Institution in charge of land pooling 3. Percentage allocation of inclusionary plots	Primary data 1. Semi structured interview i. Officials of Department of Urban Development and Building Construction (DUDBC) and Kathmandu Valley Development Authority (KVDA) Secondary data Review of: i. Town development Act, ii. KVDA Act and Regulations iii. Land Development Directives. iv. Land Pooling manual v. National shelter policy
		2. Mandatory	1. Obligation to land owners 2. Provisions of punishments/fines to monitor	
		3. Voluntary	1. Complementary instruments like cost offsets, incentives or rezoning	
2. How is Icchangu Narayan land pooling project implemented ?	Implementation of land pooling	1. Project Initiation	1. Project setup <ul style="list-style-type: none"> • Formation of committee 2. Project size <ul style="list-style-type: none"> • Number of land owners • Number of plots 3. Project operation <ul style="list-style-type: none"> • Loan taken • Valuation of land 	Primary data 1. Semi structured interview i. Officials of DUDBC and KVDA ii. Land owners committee 2. Official Data Review of: i. Project progress report ii. Detail Project Report (DPR) iii. Minute of meetings Secondary data Review of: i. Land pooling manual ii. Newspaper
		2. Participation and Negotiation	1. Number of public hearings for negotiation 2. Holdouts and supermajority rule 3. Number of court cases	
		3. Subdivision and Servicing	1. Preparation of new master plan 2. Percentage contribution for infrastructure and amenities 3. Percentage contribution for reserve plots 4. Percentage of cost recovery of project	
		4. Land reallocation	1. equity in location 2. equity in size of plots	

Research Sub Questions	Concepts	Variables	Indicators	Data source
<p>3. What has hindered the government for incorporating the inclusionary provision in the Icchangu Narayan land pooling project?</p> <p>4. What has limited the land owners from providing the inclusionary low income plots in the Icchangu Narayan land pooling project?</p>	Factors hindering the government and land owners for inclusionary provision	1. Political will and government's capability	<p>1. Willingness</p> <p>2. Availability of trained staffs</p> <p>3. Transparency</p> <p>4. Accountability</p>	<p>Primary data,</p> <p>1. Semi structured interview</p> <p>i. Officials of DUDBC and KVDA</p> <p>ii. Land owners committee</p> <p>2. Official Data</p> <p>i. Project progress report</p> <p>ii. Detail Project Report (DPR)</p> <p>iii. Minute of meetings</p> <p>iv. Tender evaluation documents</p> <p>Secondary data</p> <p>Review of:</p> <p>i. Town Development Act 1988</p> <p>ii. Land Pooling manual</p>
		2. Land market conditions	<p>1. Demand for serviced land before the project</p> <p>2. Change in land prices before and after land pooling</p>	<p>Primary data,</p> <p>1. Semi structured interview</p> <p>i. Officials of DUDBC and KVDA</p> <p>ii. Land Owners committee</p> <p>2. Official Data</p> <p>i. Project progress report</p> <p>ii. Detail Project Report (DPR)</p> <p>iii. Minute of meetings</p> <p>iv. Tender evaluation documents</p> <p>3. Observation</p> <p>i. Project area</p>
		3. Public support for inclusionary plots	<p>1. Perception towards the provision</p> <p>2. Willingness to pay</p>	<p>Primary data</p> <p>1. Semi structured interview</p> <p>i. Officials of DUDBC and KVDA</p> <p>ii. Land Owners committee</p> <p>2. Official Data</p> <p>i. Project progress report</p> <p>ii. Minute of meetings</p>
		4. Land owner's contribution	<p>1. Change in landowner's contribution (they has to contribute for low income plots)</p> <p>2. No change in contribution (market rate buyers pay for low income plots)</p>	<p>Primary data</p> <p>1. Semi structured interview</p> <p>i. Officials of DUDBC and KVDA</p> <p>ii. Land owners committee</p> <p>2. Official Data</p> <p>i. Project progress reports</p> <p>ii. Minute of meetings</p> <p>Secondary data</p> <p>i. Land pooling manual</p>

Research Sub Questions	Concepts	Variables	Indicators	Data source
		5. Land values (after the inclusion of low income plots)	1. Demand for land after the inclusion 2. Change in land values after the inclusion	Primary data, 1.Semi structured interview i. Officials of DUDBC and KVDA ii. Land owners committee 2. Official Data i. Project progress reports ii. Minute of meetings iii. Tender evaluation documents 3. Observations i. Project area

Source: Author (2015)

3.2 Research Strategy

The research strategy adopted for this research is single holistic case study which analyses a single case of Icchangu Narayan land pooling project at Kathmandu. Case study is research strategy which is used when the research is seeking for “How” and “Why” type of question with little or no control over the behavioural events and when the focus of study cannot be isolated from its context (Yin, 2013). It is used when there is more than one independent variable. Hence it examines the interaction between different factors or events that contribute to the dependent variable within the context. Moreover in a single holistic case study, a unique case or an extreme situation is looked at within a specific environment (Baxter and Jack, 2008).

This research is an explanatory research which seeks to investigate why the inclusion of 10% low income plots is not being implemented. Further this case of Icchangu Narayan land pooling at Kathmandu is a unique case as in this project government has bought the land for low income people instead of providing it through the land pooling project. Also there is not any other replication of this case within the city and country. Hence single holistic case study is the most suitable strategy to dig into the factors and its interactions with the events within the environment that hinders the implementation of the inclusionary provision in the Icchangu Narayan land pooling project.

Riege (2003, p.80) states that, “ Case study method is about theory construction and building, and is based on the need to understand a real life phenomenon with researchers obtaining new holistic and in-depth understandings, explanations and interpretations about previously unknown practitioner’s rich experiences.” However the biggest limitation to this strategy is that it lacks the issue of generalization. In the single holistic case study, results or the findings depends upon the underlying process within the context. Therefore the findings of Icchangu land pooling project cannot be generalised to all the land pooling project. However it adds to the theory that certain phenomenon occurs in certain context and helps in theory building. Furthermore it is challenging to analyse the large sets of qualitative data available from the research and it also becomes difficult to cross check the information. Moreover there is also the challenge for the researcher not to influence the case or not to be influenced by the case. Therefore researcher has to provide enough detail to ensure the validity and reliability of the research (Baxter and Jack, 2008). This research takes care of these issues of validity and reliability and tries to overcome it as far as possible in all the research process as discussed in section 3.3.4 below.

3.3 Data collection methods

Data collection is a process of preparing and collecting data for any decision making. The two types of data namely primary data and secondary data are needed for this research work which is described below.

3.3.1 Primary Data

Primary data is the first-hand data which has never been published before. These are the most valuable and reliable data as it has never been modified by other people. The primary data collection methods used in this research are:

- Semi-structured interviews with the officials from Kathmandu Valley Development Authority (KVDA) and Department of Urban Development and Building Construction (DUDBC) and land owner's representatives from local support committee for project
- Structured interview within semi-structured interview for some parts of research
- Observation of site area
- Review of official records like Detailed Project Report (DPR), project progress reports, minutes of meetings and tender evaluation documents of reserve plots.

This research seeks to identify the reasons for the abandonment of inclusionary provision which means it deals with qualitative data. Since semi structured interview is one of the data collecting methods for qualitative analysis, this data collection method fits to this research. Moreover semi structured interview is used when theories have provided some information about the phenomenon and the researcher wants to confirm it with the room to get something additional from the interviewees. It is suitable to understand the perceptions and opinions of the respondents regarding the issues in topic which further enables for more investigation to provide more information and clarification to the answers (Barriball and While, 1994). Also this is in line with the single holistic research strategy used for this research through which theories can be checked with reference to the site context taking in-depth interviews wherever it is needed to dig into the issue and asking closed questions where just confirmation is required.

An observation of project site area is another method used for collecting primary data for some part of this research for which the researcher has acted as a non-participant observer. This examines the characteristics of the area that where it is growing and whether there is active land market or not. Moreover this also helps for the triangulation of data to increase the validity of research. Furthermore DPR, progress reports, minutes of meetings and evaluation documents are also other sources of primary data which provides insights on details regarding project implementation and its different issues.

3.3.2 Secondary Data

Secondary data are the pre-existing data that has been collected by others, published and has been used for different purposes in different context. It provides those data which is not possible to collect from primary sources and which also further increase the validity of research through triangulation. The secondary data sources for this research are as follows:

- Legal documents like Town Planning Act, Kathmandu valley Development Act, Town Planning Directives, National shelter Policy and Land Pooling manual
- Policy report like Nepal housing sector profile by UN-HABITAT
- Newspaper
- Literature relevant to the subject of research

3.3.3 Sampling

For the collection of primary data through semi structured interview purposive quota sampling is done. In purposive sampling, those people are considered in sample that have knowledge in the subject of research. Teddlie and Yu (2007, p.77) defines purposive sampling as, “selecting units (example individuals, groups of individuals, institutions) based on specific purposes associated with answering a research study’s question”. Therefore this sampling technique is the most productive one.

In Nepal, only two parties that is the government organisation which is implementing land pooling project and land owners who are contributing land for land pooling are involved in the land pooling project. There is not any developer involved in land pooling like in many other countries cases. However after planning, the infrastructure works like construction of road, drainage etcetera are contracted out to the contractors through bidding process.

This research considers two groups of actors that are the government officials and the land owners as quota who are the only stakeholders involved in the implementation of Icchangu Narayan land pooling project. These government officials are the experts regarding the subject. Also the land owners are the most important stakeholders as they are the ones who have to contribute their land in land pooling to make inclusionary programs successful. Therefore expertise and responsibilities are the basic selection criteria for defining samples for interview. The members included in the sample from two quotas are shown in table 5 and 6 below.

Respondents from Government

One group of respondents from government are the people associated with the Icchangu Narayan project management sub-committee. This sub-committee is formed for the effective implementation of the project. Besides this, the other respondents from Government are the officials of Kathmandu Valley Town Development Authority (KVDA) who are directly working in this project. Moreover it is important to incorporate their views as the members of the sub-committee are all the higher management level officials and it is crucial to address the issue from middle level working staffs as well.

Table 5: Respondents of Interview from Government

S.N	Stakeholder	Organisation	Position in Organisation	Position in Committee
1	Government Officials in Icchangu Narayan land pooling project management sub committee	DUDBC	Director General	Member
2		KVDA	Chief	Advisor
3		DCO, Kathmandu, KVDA	District Authority	Member
4		KVDA	Project manager	Member secretary
5	Government Officials working in Icchangu Narayan land pooling project	KVDA	Section officer	-
6		KVDA	Finance officer	-
7		KVDA	Engineer	-
8		KVDA	Junior officer	-

Note: DUDBC- Department of Urban Development and Building Construction, KVDA- Kathmandu Valley Town Development Authority, DCO- District Commissioner Office

Source: Author (2015)

Respondents from Land owners

The respondents from landowners are the landowners associated with the local support committee (users committee) for the project. The members of users committee are the people

elected by the land owners of the project area, so they represent the voice of all. However it could have been more valid if the survey had been done for all the landowners. Further this was not possible because it was found that most of the land owners do not live in the project area. It is because land pooling is being conducted over the agricultural area and the area is being serviced for residential purposes. Till now most of the land owners live in other parts of the city and the construction of houses is going on in the area. The respondents of interview from land owner's side are presented in table 6 below.

Table 6: Respondents of Interview from Landowners

S.N	Stakeholder	Position in Committee
1	Land owners in local support committee, for Icchangu Narayan land pooling project	Director
2		Secretary
3		Treasurer
4		Member
5		Member

Source: Author (2015)

3.3.4 Validity and Reliability

Validity measures how accurately the study reflects the concepts demanded by the researcher in the research. For a research, a researcher has to ensure the construct validity, internal validity and external validity. The measures taken to maintain the validity and reliability for this research work is shown in table 7 below. Firstly, researcher has to be sure that subjective judgements would not be made derived from the personal relationships during the research design, data collection and the analysis. It refers to construct validity which is to establish appropriate operational measures for the research (Riege, 2003).

Table 7: Case study tactic

Design Tests	Case study Tactics in theories	Case study tactics for inclusionary provision in Icchangu Narayan land pooling project
Construct Validity	<ul style="list-style-type: none"> Establish appropriate operational measures Establish chain of evidences 	<ul style="list-style-type: none"> No subjective judgements was made based upon previous relations with organisations and site context Same questions was repeated to the different stakeholders for cross checking
Internal Validity	<ul style="list-style-type: none"> Triangulation of data Member check 	<ul style="list-style-type: none"> Data triangulation was done through the data collected from interviews with government officials and land owners, secondary data, project reports and sometimes through observations Draft findings of analysis was confirmed with the key informants
External Validity	<ul style="list-style-type: none"> Use theories in single case Multiple cases to generalise 	<ul style="list-style-type: none"> Findings are compared cautiously with the theories Lacks multiple generalisation
Reliability	<ul style="list-style-type: none"> Develop case study Protocol Prepare database for transparency 	<ul style="list-style-type: none"> Study protocol was prepared to make sure all the important issues are covered Record keeping of each steps of the process is maintained. Audio recording of the interviews was done.

Source: Modified from Riege (2003), Yin (2003) and Baxter and Jack (2008)

Internal validity checks for the credibility of the research (Riege, 2003). It has to be sure that the issues that are intended to measure are covered or not and whether the research findings are interpreted correctly or not. The purposive sampling method used in this research has this challenge to confirm that the sample has covered everything required to answer the question or not. To overcome these challenges, data triangulation using three sources of data was

done. Triangulation from different data sources and data types is a strategy which makes sure that a certain phenomenon within the context is viewed and analysed from different perspectives to enhance the data quality (Baxter and Jack, 2008). For this, different sources of data like secondary data and primary data were used to measure the same things. Furthermore where necessary different data collection methods were used like observations and semi-structured interviews with different stakeholders and the results pointing towards same direction increases the internal validity. Also after the preliminary analysis of the data, member check was done with the key informants of the interviews so as to check and clarify the interpretations and the results.

External validity is about generalising or transferring the findings into the wider population of existing debates of cases. Rather than statistical generalisation, case study depends on analytical generalization which compares or interprets the theories with the empirical results of a case or the cases of analysis (Riege, 2003). In this case of Icchangu Narayan land pooling project also, the factors affecting the implementation of inclusionary plots in land pooling which was derived from the existing theories is reviewed meticulously comparing with the findings of the research. However the research lacks the generalisation through the multiple cases.

Reliability refers to the extent to which similar results would be obtained if the operations and procedures adopted by the researcher are repeated exactly in the same manner by another researcher (Riege, 2003). For this, transparency was addressed and things are done with caution. Firstly case study protocol was prepared including all the necessary topics to be covered in order to answer the research question. (Refer annex I for the study protocol). Moreover data base was prepared including stepwise process of data collection and then analysis was done using Atlas Ti.

3.4 Data Analysis Method

The first step of the data analysis began with the translation and making transcript of the interviews from Nepali language to English. Then the data collected from different sources of information are treated in Atlas Ti using coding. Bailey (2007, p.127) defined coding as "a process of organising a large amount of data into smaller segments that when needed can be retrieved easily". Grouping the data collected from the different respondents on the similar variable is done to check the pattern. Further, since this research uses qualitative analysis, transcripts were entered in Atlas Ti software and then data are analysed under groups of codes and memos of variables and indicators to answer the research question. Moreover this also increases the internal validity and reliability of this research work as systematic coding helps to identify whether the intended data are collected or not while providing transparency in the analysis of data.

3.5 Summary

This chapter begins with the operationalization of the key concepts for each research sub-question which is then followed with research strategy, data collection methods and data analysis method suitable to this research. Single holistic case study is used as a research strategy for this research for its uniqueness of being the only case in which government bought land for low income group. However there are certain limitations which are dealt in the process to maintain the validity and reliability.

The first research sub question is about identifying how the provision of inclusionary low income plots is put into the institutional framework in Kathmandu, Nepal. Three variables legal provision, mandatory and voluntary provisions identified from literature explains the question. Moreover to measure each variable, various indicators like levels of regulations,

percentage allocation of inclusionary plots etcetera mentioned as in table 4 above is identified. Data are collected through semi structured interview from the officials of Department of Urban Development and Building Construction (DUDBC) and Kathmandu Valley Town Development Authority (KVDA) who are the expert in this subject. Moreover the review of related legal documents is also done to increase the validity of data.

The second research sub-question is about how the project is implemented which helps to identify whether there is smooth implementation or not. For this four variables project initiation, participation, subdivision and reallocation are identified. Further to answer each variable, different measurable indicators are identified like project size, operation mechanism, public hearings, and holdout etcetera. Semi structured interview with the two different stakeholders that is government officials and land owners measures the indicators. Also official data like project progress report and minutes of meetings are reviewed to cross check the information. Lastly secondary data like land pooling manual is reviewed.

The third question is about identifying the factors which have hindered the government and the fourth question is about identifying the factors which has limited the land owners from implementation of the provision. For this five variables political will and government's capability, good land market, public support, contribution ratio, and change in land values are identified from the literature which are measured through different indicators as mentioned in table 4. Semi structured interview with government officials and land owners gives measure of the indicators. Also official data like Detailed Project Report, project progress report, minutes of meetings and tender evaluation documents are reviewed to cross check the information which also helps in data triangulation to increase the validity. Field Observations help to solve some issues regarding the surrounding condition about land market. Furthermore secondary data like land pooling manual and newspaper are reviewed. After the analysis it is identified that among the factors which affected the government most and which affected the land owners most.

Finally the interview guide is prepared for the data collection based upon the indicators. Please refer annex II for the interview guide of government employee and annex III for the interview guide of users committee. Furthermore the collected data is analysed using Atlas Ti software to get the results.

Chapter 4: Presentation of Data and Analysis

This chapter presents the findings of the data collected from primary and the secondary sources during the field work as guided by the methodology presented in chapter 3. The chapter is started with the background of land pooling projects in Nepal, its procedures and implementing mechanisms. Moreover this is to provide the context to the implementation of Icchangu land pooling project. After that the inclusionary provision of low income plot in the Icchangu Narayan land pooling project is discussed starting with the general overview of project, then legal and policy framework for the project, implementation mechanism of the project and the factors that influence the implementation of inclusionary provision in the project. Furthermore data are presented and analysed as per the concepts and indicators used for data collection and making interview questions for answering the research questions.

4.1 Land Pooling in Nepal: The context

4.1.1 Land Pooling process in Nepal

Population growth and urbanization has resulted in an unplanned growth of cities in Nepal. Cities now lack the basic infrastructure and services. Moreover there is lack of government resources for providing infrastructures and for acquiring land to provide these. In this scenario land pooling has come up in Nepal as a suitable tool for land development which overcomes the problem of financial deficiencies in government and provides land and resources both from the land owners of the area. As defined in land pooling manual by Sangacche and Gorkhali (2003, p.1), in land pooling the private lands of individual people, groups and institutions are brought together to make one unit. Then after the development of serviced plots with all the necessary infrastructures, each plot is returned to its original land owner with the deduction of contribution for infrastructure. Furthermore land pooling is considered as an extraordinary example of public private partnership in Nepal.

Implementation process of land pooling in Nepal

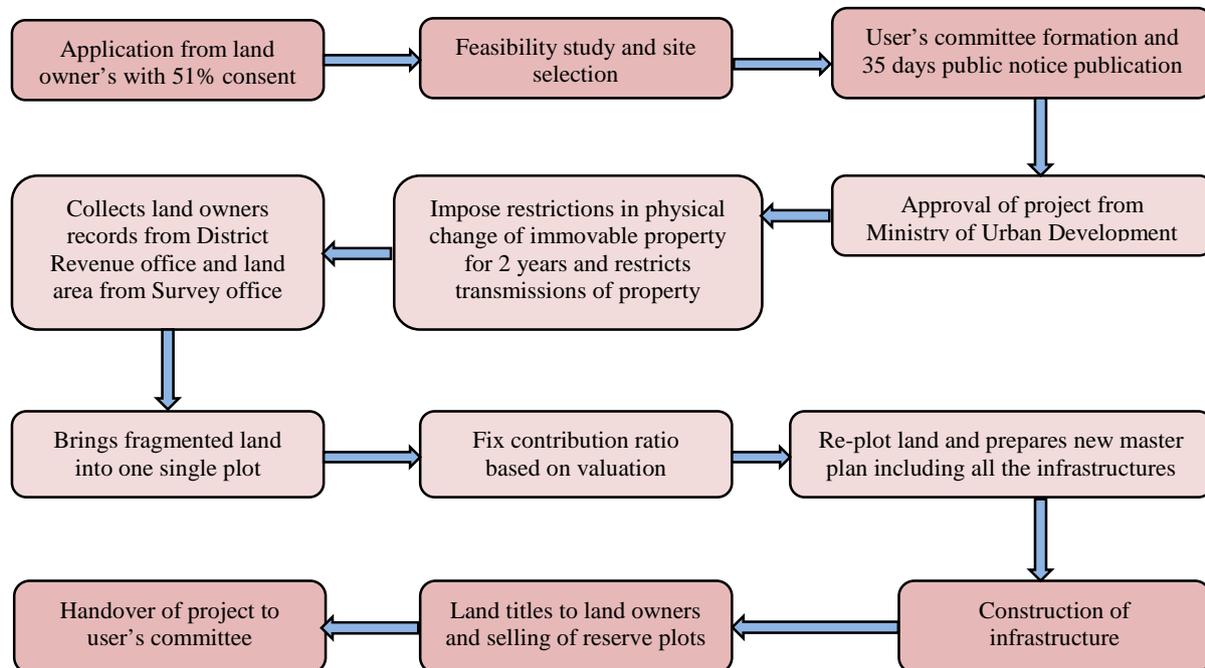
Land pooling is implemented as directed by the legal documents of Government of Nepal and Kathmandu Valley development Authority (KVDA). Land pooling in Nepal is started upon an application by land owners for land pooling showing the consent from minimum 51% of people. After that feasibility study of the area is done as per the necessary criteria of site selection. If the area meets the criteria then user's committee is formed. The representatives of user's committee are the elected members by the land owners of the area. Also announcement of project is made in a national newspaper with the call for people that whoever is not satisfied can come and files complain within the 35 days of notice. Further, after getting tentative approval from land owners, approval of project from Ministry of Urban Development is taken. Implementation steps of land pooling are shown in figure 5 below.

Once the project is approved formally, KVDA restricts the physical change in any immovable property within the project area for two years. KVDA requests survey department for all the maps and request district revenue office for the details of land with land owner's list. Then the fragmented land is brought into one plot under the name of project. However KVDA has to request district administration office for the acquisition of land as it does not have power for that. After that land is re-plotted and new master plan is made with all the infrastructures.

Re-plotting is done after the fixation of contribution of land by people for cost recovery purpose of project. Construction of infrastructure and other administrative costs are governed by the sale of allocated reserve plots. Moreover developed plots are returned to the respective land owners and survey office is requested to provide the new blue prints of the area. Finally

the project is handed over to the users committee for its management. Furthermore the auditing of land pooling projects is done as per the rules and formats of Government of Nepal. Figure 5 below shows the summary of the implementation process of land pooling in Kathmandu.

Figure 5: Implementation process of land pooling in Nepal



Source: Derived from Town Development Act (1988) and Karki (2004)

Process and Criteria for the selection of land pooling area

The first step to initiate land pooling is to identify the possible areas for land pooling. In Nepal, to guide this there are process and criteria for the selection of land pooling area in the land pooling manual prepared by Department of Urban Development and Building Construction. Further these process and criteria are discussed below.

Process for identifying land pooling area

The process of identifying the area for land pooling as directed by land pooling manual of Nepal could be discussed under following three points.

i. Collection and study of data relating to the context

The first step to start is to collect and study the zoning plans, physical development plans and land use maps which are prepared to accommodate the urbanisation of city. Blue prints of the concerned area are also studied along with the Google maps and pictures.

ii. Consultation with the related Agencies

One of the important steps of area identification is the consultation with the land owners and the agencies which are related with urban planning and development. The agencies like Department of urban development and building construction, municipality, district development committees, survey department, district revenue office, district administration offices etcetera are consulted to gather the information and identify the areas which are ripe for land pooling. Moreover this helps to implement the project which is really needed and feasible.

iii. Site visit

Visit of the location provides important information regarding the topography of areas like which area is high land and which is low land. It also provides general idea that which area is growing today and which area has the possibility of urban growth in future. Therefore it gives the idea about the direction of expansion of city and helps in selection of land pooling area.

Criteria for identifying land pooling area

In case of Nepal, to identify the probable land pooling area, the area should be checked from a technical and social point of view. The area which is feasible from technical point of view and which is accepted from the land owners are given more preference for land pooling. Furthermore the technical and the social criteria for identifying land pooling area as given by land pooling manual are mentioned in table 8 below.

Table 8: Criteria for identifying land pooling area

Criteria	List of sub criteria
Technical Criteria	Potential area for urbanisation in near future
	Small town and market area with potential to be city
	Area which is not highly fertile
	Area which cannot be disturbed and damaged by rivers
	Area which has connection with main city
	Area where there is service of drinking water or possibility for its provision
	Area which is marked for land development by physical development plans
	Area where there can be the resources for construction of infrastructure
	Area where there is the demand of housing plots
	Where there few construction of houses has started but mostly the land is vacant
	Area where there would be the vast difference in the land prices before and after the land pooling
	Area where there are big plots of irregular shape
Social Criteria	Area where local land owners will support land pooling
	Area where local leaders and political parties have positive attitude towards the project
	Area where land owners and person who is using that land could be easily identified
	Area where there is less numbers of land owners and persons who is using that land
	Area where there is social integration of land owners and person who is using it

Source: Sangacche and Gorkhali (2003)

Criteria for allocating contribution of land by land owners in land pooling

Contribution by land owners is the most critical part in land pooling as it can influence people's mind for land pooling. Contribution is calculated as per the nature and type of proposed infrastructures in land pooling. It is calculated on the basis of width, type and quality of road before and after land pooling. Furthermore it gives priority to maintain equity among all the land owners.

In Nepal, land owner's contribution in land pooling is based upon the association of their land with road conditions before and after the land pooling. Moreover this depends upon the frontage of the re-plotted land in relation to the width of the new roads provided by land pooling (Refer Annex IV, for the details of land owner's contribution). To maintain the turnings in road, in average 1% should be contributed by the land owners in addition. In addition to this, for reserve plot contribution is based upon the quality of infrastructure and

the market price of the land and for open space, contribution is based upon the area of project as presented in table 9 below (Sangacche and Gorkhali, 2003).

Table 9: Land owner's contribution for reserve plot and open space

Particulars	Criteria	Contribution percentage
Reserve plots	Quality of infrastructure and market price of land	5% to 12%
Open space	Project area up to 25436m ²	6%
	Area between 25436m ² and 50873 m ²	5%
	Area 50873 m ² and 101747m ²	4%
	Area 101747m ² and 20394.81m ²	3.5%
	Area between 20394.81m ² and 406988 m ²	3%
	Area above 406988 m ²	2.5%

Source: Sangacche and Gorkhali (2003)

4.2 Inclusion of low income plot in Icchangu Narayan land pooling project

4.2.1 Overview of Project

Icchangu Narayan land pooling project is being implemented on 30.9 hectares of land at Icchangu Narayan area of Nagarjun municipality. The project was started on 9th October 2006 and the intended completion date is 15th July 2016. However the completion date has already been extended two times before reaching this target. The delay in project completion is due to two main reasons. First one is that the project was in hold for 2/3 years due to court cases. Second is that now the project is providing more infrastructure than as planned in Detailed Project Report (DPR). It is because this project is in profit and they now have the budget for providing more infrastructures. Moreover financial benefits obtained from the project could be utilised within the project area only, they cannot take money out of the project. Now the project is in finishing stage with the road black topping, water supply and electrification work going on at the site.

This project is unique in case of Nepal because in this project government has bought land for social housing construction. Department of Urban Development and Building Construction (DUDBC) bought land in this land pooling area in two phases. In first phase, DUDBC bought 1653m² of land at the rate of 408 US\$ per m² which means they bought land in the price which is 20% above the minimum quoted price of reserve plot by the project. Further in second phase government bought 2371m² of land at the rate of 340 US\$ per m² which is equals to the minimum marked price of reserve land by project. (Refer annex V for the land prices adjusted for inflation). However in second phase DUDBC promised to provide 8m wide access road to the land pooling area. Therefore the analysis shows that the deal is beneficial to the land owners.

4.2.2 Legal and Policy Framework

This section is the analysis of data regarding the legal and policy provision for land pooling and inclusionary zoning in context of Nepal. Data was collected and investigated to check how strong the prevailing legal documents are and how the inclusionary provision could be enforced in land pooling. Moreover the nature of provision whether it is mandatory or voluntary and whether there are some monitoring mechanisms to control it is checked and analysed. For this section, primary data was collected through the interviews with the government officials who are associated with management subcommittee of project and project staffs of Icchangu Narayan land pooling project as explained in section 3.3.3 sampling, table 5 above. Likewise secondary data was collected through Land Pooling Act

1988, Kathmandu Valley Development Act 1988 and Regulations 2012, Land Development Directives 2005, land pooling manual and National Shelter Policy 2011.

Legal Documents for land pooling

Land pooling in Nepal was started after the enactment of Town Development Act (TDA) 1988. Moreover the prevailing laws for land pooling are Town Development Act (TDA) 1988, Kathmandu Valley Development Authority (KVDA) Act 1988 and Regulations 2012. Besides these there are other documents like land pooling manual and National shelter policy 2011 which are followed for conducting land pooling. Every single thing done within the boundary of land pooling is based upon the provisions given by these documents. However the most common and the important legal document for land pooling is TDA 1988. All the eight respondents from government are well informed about TDA but only half of them have full knowledge on all the documents.

For successful application of land pooling, legal framework is very important as it protects the property rights (Turk, 2008). The analysis of legal documents regarding land pooling in Nepal shows it is well designed. Moreover the roles and responsibilities of each parties involved is clear for the implementation of land pooling.

Legal documents for inclusionary provision in land pooling for low income group

In Nepal there is the provision for inclusion of low income groups in land pooling projects which is given by Town Development Directives (TDD) 2005 and National Shelter Policy 2011. In TDD 2005, there is the inclusionary provision in section 5 that it could be provided for low income group and special excluded group. As per it low income group people are those who are below poverty line¹. Moreover excluded group includes people living in squatter who do not own land in the whole country, people displaced by government projects, female headed households and family with disabled people. Additionally these groups are identified by collecting applications from these people through the publication of public notice in local and national media. Nevertheless due to lack of clarity in definitions of low income group, squatters and minority group in the legal documents, it has become difficult for government officials to identify these people.

“It is not clear.....Again there is the problem that who is poor. And our Ministry of Urban Development told that they cannot identify poor, then who is poor and whom to allocate land taking land from public (emphasis given).”(Respondent 4, government official, June 2015)

Theory confirms that affordable housing is intended for those people who fall below the officially defined income level by country (Calavita and Mallach, 2010). However in case of Nepal the definition of terminologies are not clear to proceed confidently. TDD 2005 has taken the poverty line of 2001 which shows that income level is not timely updated. Moreover when the Ministry itself cannot identify the group of people falling under these categories, then it hinders the project implementation at its start.

Kathmandu Valley Development Authority (KVDA) can have the provision for low income group and excluded people in land pooling project with the conditions. The provision could be up to 10% of the reserve plot which means the land for low income group would be the contribution by land owners. However in National Shelter Policy there is the provision that

¹ As per National Planning Commission, poverty line is estimated to be below 162 US\$ annual income per person which is calculated for the year 2001. Refer annex I for the price adjustment for inflation.

government should develop internal funding mechanism for providing land in a subsidised rate to the low income group. Therefore when the legal documents are conflicting then there is the room to play it more.

“I exactly do not know where is Inclusionary provision but I have heard in many presentations that 10% of reserve plot should be allocated to the urban poor in land Pooling (LP).”(Respondent1, government official, June 2015)

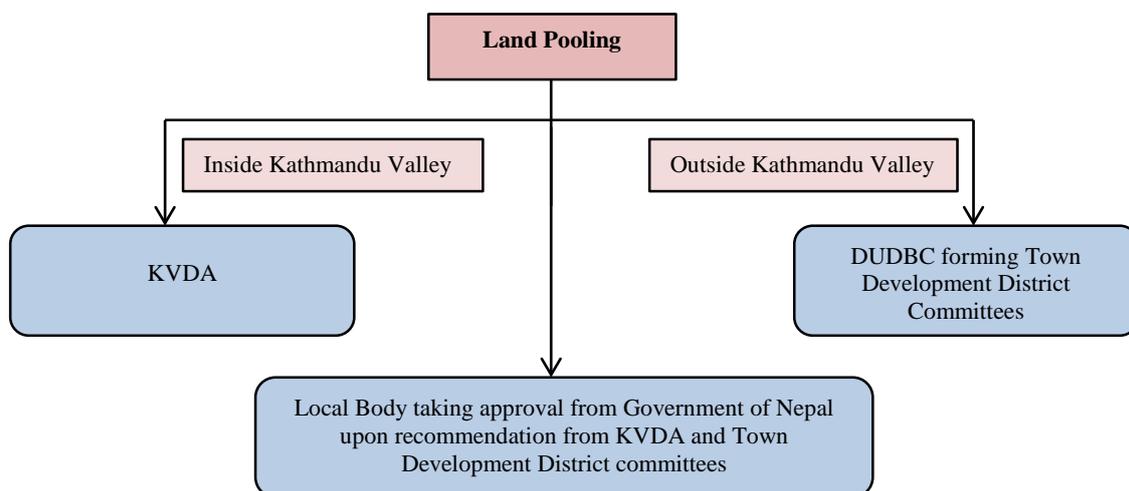
*“..... But the things are in contradiction to each other. There is no classification of inclusion. There is no definition that what do you mean by poor? And who suffers with this? It’s people’s money and how can I give it like a charity. So there is no proper management. **Cost is thrown over others head (emphasis given).**”(Respondent 5, government official, June 2015)*

As stated in above quotation, from interviews it was found that inclusionary provision still lacks clarity in context of Nepal; people have heard of the provision for low income group in land pooling but are not aware of the legal documents. Even if they have the knowledge, they are not satisfied with the provision. Moreover officials from the government side themselves think that this is just the way of throwing cost in others head without proper management.

Authorities responsible for conducting Land Pooling

The main responsible body for land pooling inside Kathmandu valley is Kathmandu Valley Development Authority (KVDA). KVDA can conduct land pooling in areas from where there is application from 51% of land owners or tenants demanding land pooling. Local authority like municipality can also conduct land pooling but only after taking permission from the Government of Nepal with the recommendation of KVDA (Town Development Act, 1988). Further outside Kathmandu valley, Department of Urban Development and Building Construction (DUDBC), Division offices can conduct land pooling by forming Town Development District Committees as shown in figure 6 below.

Figure 6: Authorities responsible for conducting land pooling



Source: Derived from (Town Development Act, 1988)

*“LP could be done by Kathmandu Valley Development Authority (KVDA) and municipality. But the **definition for that is not sufficient (emphasis given).** KVDA can delegate its power to municipality to allow then doing land pooling.” (Respondent 5, Government official, June 2015)*

Theoretically land pooling could be initiated both by the public and private organisation.

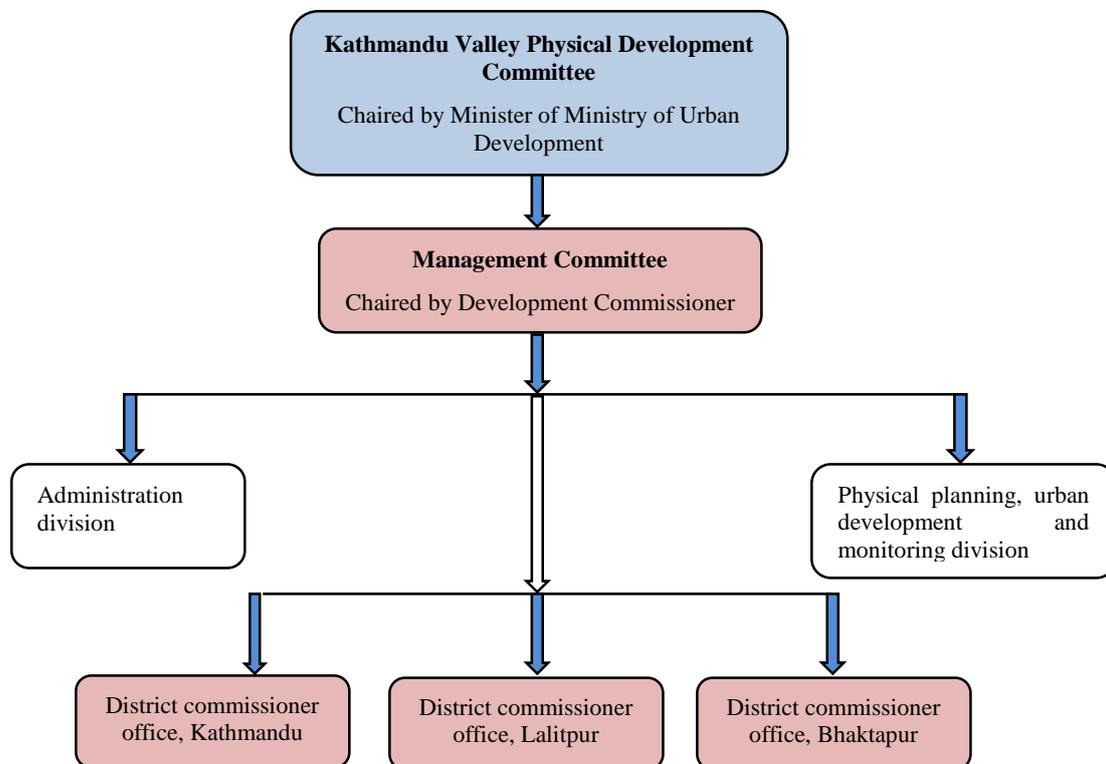
However in case of Nepal, only government organisation has legal authority for conducting land pooling. Within the government, even though local bodies can conduct land pooling, description for that is not clear. In practice also most of the land pooling is implemented by KVDA. Moreover Ichhangu Narayan land pooling is also being executed under KVDA.

KVDA and its role in land pooling

KVDA is a government body established in April 2012 as per KVDA act 1988 by dismissing the Kathmandu Valley Town Development Committee. It was established with the aim of preparing and implementing integrated physical development plan for Kathmandu valley as demanded by the increasing urban population of the valley. The top governing body for KVDA is Kathmandu valley physical development committee which is chaired by the Honourable Minister of Ministry of Urban Development. The other members of this committee are four Ministers from related Ministries, 9 secretaries of Government of Nepal, chief executive officers of municipalities and chairpersons of district development corporations (KVDA, 2014). The organizational chart of KVDA is shown in figure 7 below.

The chief of KVDA is appointed politically by Government of Nepal (GON) who also serves as a member secretary for the physical development committee (KVDA, 2014). The main role of KVDA in land pooling is the management from the beginning till the completion of project. KVDA has power to collect its financial resources but only after taking approval from GON and it can also get manpower from GON. However it does not have power for land acquisition, GON has to do that for KVDA. Furthermore Town Development Act (TDA) 1988 gives power to GON to dissolve KVDA if the committee has completed the task, if it does not perform the job properly and if it forbids the orders of act.

Figure 7: Organizational chart of KVDA



Source: KVDA (2014)

KVDA initiates the project, coordinates among different government organisations and land owners, assembles land, re-plots it with infrastructure, construct infrastructure, sells the

reserve plots and gives the re-plotted land back to the original land owners. The difficult part is that KVDA has to coordinate with many government organizations for the implementation of project. The roles of these organizations are also important. However it is found that there is some coordination problem of KVDA with these organizations which hinders the work progress. For example the staffs of these organisations show objection from time to time unless they get satisfying allowances as stated in interview below.

*“Role of KVDA is very important in LP; its role is basically on management part. For LP KVDA publish public notice in a national newspaper to all the landowners. In that notice project is announced, then for acquisition CDO (chief district office) is requested and the acquisition is done for two years. From Malpot (District land revenue office) list of land owners is taken for this and blue print of land is taken from Napi (Survey office). It is also difficult to coordinate with these offices. **They show objection time to time until they get satisfying allowances (emphasis given).** After acquisition land is brought to one single plot in the name of project.” (Respondent 2, Government official, June 2015)*

Enforcement of inclusionary provision for low income group

In Nepal inclusionary zoning could be enforced through Town Development Directives (TDD) 2005 section 5.2 as it is stated in the document that, “up to 10% of the reserve plots could be allocated for the low income group and the excluded group.” The problem with this is about the status of the document that it is just a directing document for facilitating land pooling which is approved by the Ministry of urban development only. Furthermore it is not a legally binding document like Acts and Regulations which are approved from the cabinet. However in international level, inclusionary zoning comes as a land use regulation. Most of the countries address it under national legislation and some address it as a part of policy for housing affordability (Calavita and Mallach, 2010).

There are many unclear terminologies within the document which is restricting the enforcement. The definition of poor and inclusion is not clear. Nonetheless respondents think that it can be still enforced if government shows strong willingness for it. The analysis of data shows that the respondents from government are not satisfied with the provision. They emphasized that government cannot take decision upon people’s property.

*“From TDD, 10% of reserve plots have to be allocated for poor. **If government take strong decision (emphasis given)** in favour of provision then it can be enforced. But now the provision is in just a working procedures or directives. It is not rules and regulation, for that it has to be passed from the cabinet. So for now it is not that it has to be followed 100%.” (Respondent 2, Government official, June 2015)*

Usually the trend of inclusionary zoning percentage throughout the world presents the data that it is between 10% and 20% of the total housing construction. However some has as low as 5% and as much as 25% (Calavita and Mallach, 2010). In all of these countries it says minimum of these values. Nonetheless in case of Nepal, it says “up to 10%” meaning maximum of 10% which may be implied that it could be as less as one. Moreover with this landowners and government both get the room to argue against the provision. In Town Planning Scheme (TPS) of India, “up to 10% of the serviced land” is allocated for low income people (Sanyal and Deuskar, 2012). However in case of Nepal, it is “up to 10% of reserve plot” which already indicates the minimum contribution.

In the National shelter policy 2011 of Nepal there is a provision in section 4.10 that in land pooling projects, government should provide subsidies for the construction of infrastructure. Subsidy would be given as per the nation’s priority for project, size/volume of project and the capacity of land pooling implementing body. Moreover it is given in certain percentage of the

total estimated cost of project (Refer Annex VI for the detail table for subsidies). Also as defined in policy, government has to develop internal funding mechanism to subsidise low income people.

Government officials think that since government is not following the policy and not fulfilling their responsibility, they cannot also enforce the people. In land pooling everything is invested by people for infrastructure and administration costs including salaries of staff. In relation to that they question themselves that when land owners, themselves are contributing for all expenses, how the government can again ask them for more. Therefore they have dissatisfaction over the provision that it could not be executed and there are practical problems in it.

Inclusionary policy in Nepal appeared as a tool with political purpose. Government formed the policy just to put in document, it was not actually prioritised. Moreover after the policy also they are continuing with their traditional way. Respondent 4 who is government official said that, ***“Government construct that tool, if needed somewhere and if they want they can use. But here no one has break the tradition, they are working as going on from past. It is of no use. I have told from the beginning that it would be of no use (emphasis given).”***

“It was just made to make that people a hero who was there at that time in power (emphasis given), just to show that he has concern for poor.” (Respondent 5, Government official, June 2015)

Inclusionary provision: Obligation and enforcing mechanism

Town Development Directives (TDD) 2005, section 5.2 does not show that the provision is mandatory to land owners. It is stated in the document that, “up to 10% of the reserve plots **could be** allocated to the low income and the excluded group.” It does not say it **should be** allocated in land pooling to make it compulsory. Also the level of document that it is only passed from Ministry and not from cabinet exhibits its non-compulsive nature. Furthermore there is no monitoring mechanism like punishment and fines. However studies have shown that mandatory programs are more successful which have strong enforcement mechanisms like financial sanctions (Brunick, 2004, Lerman, 2006).

The inclusionary provision in Nepal is found to be neither mandatory nor completely voluntary. It does not meet the voluntary requirements of international market as voluntary programs are tied up with incentives to encourage the provision. Voluntary programs are also found successful but with subsidies (Brunick, 2004). Nonetheless in Nepal, there are not any incentives to promote the provision. This shows that the instrument is not designed cautiously.

“Provision is not compulsory to land owners. It is people’s money and how can government ask them to give that to charity (emphasis given).” (Respondent 5, Government official, June 2015)

Apart from the legal provisions, information gathered from interviews of government official show that they do not see the practical applicability of the provision. They believe it should not be made compulsory as it would be unfair to take contribution from people when government is not putting any share. If this happens then they are afraid that it would bring conflict over the project and it cannot proceed.

4.2.3 Implementation of project

Implementation of the project was studied by collecting primary and secondary data regarding the project size, setup and the operation mechanisms. Primary data was collected through the interviews and the official documents. Interviews were taken with the

government officials and the land owners associated with the users committee of the project as explained in section 3.3.3 sampling, table 5 and 6. Likewise data was collected through the review of official documents like Detailed Project Report (DPR), minutes of meetings, progress reports and the tender documents. In addition to this secondary data were collected from land pooling manual and the newspaper. Data was collected to check the level of participation and negotiation in the project to analyse the project environment. Also the financing mechanism of the project and distribution technique of the developed land to land owners are studied and understood.

Project size, setup and operation mechanism

Project size

Ichchangu Narayan land pooling project is being implemented in 30.9 hectares of land and land use of the area before the project is shown in table 10 below.

Table 10: Land use of the area before land pooling

S.N	Land Use	Area (m ²)	Coverage (%)
1	Land parcel	302124.22	97.55%
2	Land Parti (without ownership)	71.54	0.12%
3	Road and drainage	7199.82	2.33%
Total		309097.56	100%

Source: DUDBC and KVDA (2005)

Initially the project area was an agricultural area and there were only 82 houses. As per the Detailed Project Report (DPR), the population of the area was only 380 and the project is expected to benefit over 9000 people after its completion (DUDBC and KVDA, 2005). There were 1003 plots in the area before land pooling and after re-plotting there are 924 plots with over 500 land owners. Furthermore this gives the idea that the project is large in scale with many landowners and plots. Therefore it could be understood that when there is more people, more issues come forward and it becomes difficult to convince all.

Committees in Project

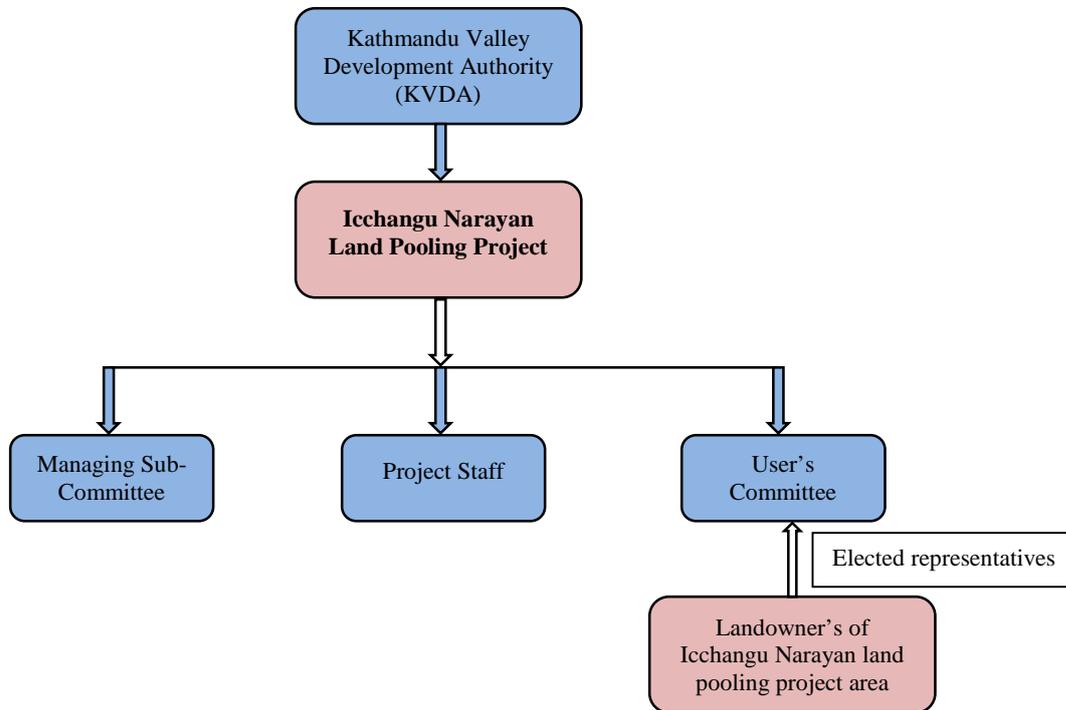
Project works with the two committees, managing sub-committee and user's committee. Nevertheless there are project staffs who are implementing the project on ground. Users committee is the representative of local land owners. Since the land owners have elected the members of users committee, they have trust on their ability to take decisions for the betterment of their community. Therefore it becomes easy and convenient to convince land owners through users committee. Moreover every decision is first passed from the users committee before reaching the management sub-committee of project.

Users committee comprises of elected members from the local people of the project area. It is a group of 15 land owners, 1 director, 1 secretary, 1 treasurer and 12 members. According to law, the director of local municipality would be the director in users committee. Nonetheless in Nepal local election has not taken place since 5/6 years. Therefore the director of users committee is also elected by landowners like other members in committee and it is realised by the government officials that there is lack of strong local leadership in project.

Management sub-committee is the representatives from government side which comprises of government officials from KVDA and related line agencies. There are all together 12 people in it in which Local development officer of Kathmandu is the director, Development commissioner of KVDA is the advisor and project manager of Ichchangu land pooling project

is the member secretary. (Refer Annex VII for the list of members in management sub-committee). Also the organizational chart of the project is shown below in figure 8.

Figure 8: Organizational chart for Icchangu Narayan Land Pooling Project



Source: Author (2015), derived from fieldwork

Besides the two formal committees which are involved in decision making and dealing with the issues of project, project staffs are the working hands of project. The coordination among the committees and the project staffs is very vital to the project. Landowner's queries and questions are mostly dealt at local level by the user's committee and this committee takes the voice of locals to the project staffs and management committee. It is the user's committee which has to motivate all the land owners for land pooling and get participation. Additionally land owners try to change users committee's decision many times which results delay in project completion. There is dissatisfaction from government employees over the roles and capabilities of users committee. Their view is that user's committee falls backwards in motivating people and they themselves send delegation of people to office and try to pressurize the government.

*“But here things are different, delegations of people directly come to office, disturb us and try to pressurise us. Actually **members of user committee urge them and send delegation to office (emphasis given)**. And this is the problem/weakness of users' committee.” (Respondent 8, Government official, July 2015)*

Loan “seed money” for financing project at initial stage

Project was initially operated by taking loan from Kathmandu Valley Development Authority (KVDA) fund and the project has to pay interest of 12% to KVDA. However the loan has been recovered by the sale of reserve plot and now the project has to pay interest only. Respondents from both the government officials and land owners from users committee believe that since the project is going well and there is high demand for sales plot, the interests will also be recovered soon. Loan is the way of financing land pooling at the initial stage (Archer, 1992), however respondents have strong feeling that it is unfair for land owners to pay interest to government authority that is KVDA.

Valuation of land

Valuation of land was done taking the rates of district revenue office and the rates of land brokers. The price of land based on the rates of district revenue office is presented in table 11 below. However at the time of preparing Detailed Project Report (DPR) the marked price of land by project was 140 US\$ per m² which was higher than the government official rate. This was done considering both the market and the official rate. Moreover the project value for the same area of land is now 263 US\$ per m² and the individual land owners are selling it above 331 US\$ per m². The valuation of land by district revenue office at the time of preparing DPR is presented in table 11 below. Refer annex V for the all the land price adjusted to inflation.

Table 11: District revenue office rates for valuation of land

S.N	Description	Land values per m ² (Rs)	Land values 1 m ² (US\$)
1	Touched with black top road	8382	87.5
2	Touched with gravel road	5029	52.5
3	Touched with non-vehicular road	1677	17.5
4	others	838	8.8

Source: DUDBC and KVDA (2005)

Valuation is one of the important works done while preparing DPR which needs to be done with caution as it affects the contribution and the decision to approve the project. Land rates of nearby areas with all the similar infrastructures to be provided by land pooling are checked to calculate the anticipated rate of land after land pooling. Moreover decision to approve land pooling is made only when it is estimated that the value of today's agricultural land would be increased in multiple folds after being developed.

"DPR was prepared with all the project details including the future valuation of project. For valuation, rates from Malpot (district land revenue office) and land brokers rate was taken. I compare the price of nearest land in similar location to this with the entire infrastructure. In my case for land pooling I will not touch the land which is 300% less in increment (emphasis given). We see it this way that if value has increased today with the infrastructure then what would be the prices." (Respondent 5, Government official, June 2015)

Participation and Negotiation

As given by Town Development Act 1988 of Nepal, participation from 51% of land owners is the first and the foremost important criteria for conducting land pooling. This is the super majority rule that if 51% shows agreement then other 49% has to forcefully join the project. However it is very difficult to get the consent of 51%. Therefore as explained in the interviews by government officials, in practice, the opposite way is adapted that is KVDA gives notice in national newspaper calling locals to file a complaint if they do not agree with the project. Then when the complaint is not from 49%, the announcement of project approval is made. The main motif of participation and supermajority rule is to let community decide their own project (Hong, 2007). Nevertheless the opposite way of getting supermajority like in this project may not win people's trust and may create problem in future.

In this project, people went to court against the project regarding the issue of contribution, displacement of people and transparency of project. So the project was in hold for 2-3 years. Finally the court gave decision that the project should be executed but with the two clauses. Clause 1 is that there should be no displacement of any people in the project and clause 2 is that contribution should be reduced.

Interviews with the respondents from government and land owners of user's committee revealed that different people in project have different intention of not joining the project. Especially the land brokers, who have their own plan with the land, do not participate. Nonetheless they urge other land owners against the project. Another group of land owners are the ones who have less land in paper than in field. So they deny participation in fear of losing the area upon which they are ruling from years. Moreover in case of Nepal, the other main problem is the conflict between land owner and the people who are working in that land from his forefather's time².

It is the responsibility of implementing agency to conduct public hearings to convince and negotiate the land owners (Turk, 2007). In case of Nepal, KVDA is not directly dealing with the land owners; rather the members of users committee do this job. This has two implications. First one is it is convenient and less time consuming that land owner's representatives convince the people and second one is local people feel the process less transparent to them. Therefore with this dissatisfaction, many filed case in court claiming that there is no transparency in project.

*"In the beginning there was no participation. There was conflict saying that there is no transparency. I am one who was against the project. **Government sat in a room with the users committee and decided everything (emphasis given)** and they did not clear things to public. Then after negotiation it went on well. There were also court cases for 3-4 years but later it was negotiated."*(Respondent 2, User's committee, July 2015)

Negotiation

From the analysis of interviews and minutes of meetings, it was found that with negotiations, conflict was reduced and project got the participation from people. For negotiations there were numbers of formal and informal meetings. It was not only the government who negotiated but the people who wanted the project to be implemented also did a lot to convince the opposing party. Respondent from government believe that convincing people is a political matter.

*"**We convinced politically (emphasis given).**" It was also mentioned as "Maoist project". There were around 100 litigations but in the end 20-25 cases were unsolved which were in court and delayed the project. For negotiations there were many meetings with land owners both formal and informal. Generally large landowners are more interested in the project. **"The ones who said yes to project spend lots of personal money to get approval from other land owners."***(Respondent 2, Government official, June 2015)

"People do not agree because they do not have good understanding of project. They think it is government's project and government will take everything. They should be made to understand the condition of land after the project. Therefore first important thing to do is to motive people."(Respondent 7, Government official, June 2015)

As mentioned in interview of respondent 7 from government, it was discovered that people go against the project as they have not understood about land pooling and its benefit. Once they understand, there would be no conflict. Sometimes government made booklet explaining about land pooling with its benefits to convince the land owners. Experienced personnel and managers are important in land pooling especially to convince and negotiate with land owners (Karki, 2004, Turk, 2007). In this land pooling project land owners did not see a good leader from government. However some land owners of user's committee also feel that

² The terminology used for this in Nepal is "Mohi". They are the person who owns the land by working on it from the period of their forefathers. So they have right of ownership over certain percentage of land given by law.

government falls back in negotiation. They believe that government's visit to site is not enough and their way of convincing people through them is not good.

*“Negotiations are done but negotiations by officers coming in field are seen less. **Good and powerful team of government with convincing power was not there(emphasis given)**. They came but were not much convincing. They were not impressive. Government asked those who are in favour of project to convince the people against the project. Local people are convinced by the user's committee.”(Respondent 3, User's committee, July 2015)*

Background of land owners and their influence

Analysis of DPR and interviews gave the findings that the original land owners of the area are farmers. However after land pooling, there is now mix group of land owners. They are politicians, bureaucrats, Army officers, Police officers and businessmen. Moreover the land owners of the area are very powerful. Government officials have the view that in land pooling land owners become powerful by default as they are the ones who are investing for everything. They contribute for infrastructure, administration costs, and salary of the staffs and even pay interest to the loan. So they are on top and try to pressurize the government.

Respondents from government feel that lack of government subsidy is one of the biggest problems in land pooling. *“Land owners are powerful. We cannot say work should be done as per government. It is because its people's money and they pay interest to government **for loan. So the problem is there is no investment from Nepal government (emphasis given)**.”* They always pressurize government...Government does not want to do anything. Therefore **there is no respect of staffs in front of land owners as well (emphasis given)**. *(Respondent 7, Government official, June 2015)*

Land owners representative in user's committee also think that they can influence government in decision making and they have done that many times. *“We can say that land owners are able to influence the government. We understood things also and then we were also able to influence decisions in our favour. With negotiations we have managed to make up things which are not good in DPR.”(Respondent 2, User's committee, July 2015)*

Project Finance

Ichangu Narayan land pooling is financed with the sale of reserve plots. In TDA 1988, section 12.1.2.d it is mentioned that land owners have to contribute land for infrastructures as per the valuation of the land (Town Development Act, 1988). Chart 1 below shows the land owners contribution and land use of project after land pooling.

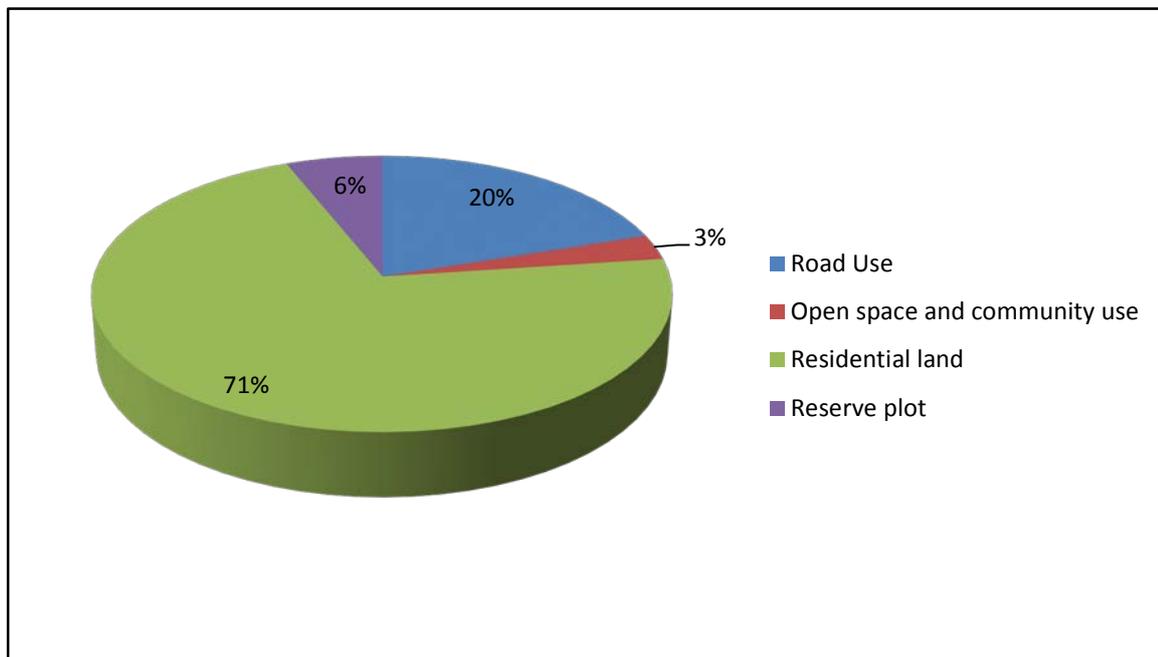
In this project, land owners have contributed 29% of land for the purpose of recovering cost of the project. They have contributed 20% for road, 3% for open space and 6% for the sales purpose as shown in chart 1 below. There is not any investment from government side. Therefore this project is carefully thought off as theory says that a well-planned land pooling project is cost recovered (Hong, 2007). Theory states that it can also cover the social need like affordable plots (Yilmaz, Cagdas, et al., 2015); however the project does not look in that side even though it has excess money than the costs of infrastructure.

This project is doing well and the implementing parties are happy that the project is in profit. *“Later we sell the sales plot....we have money. We are in profit. I think at the end we will hand over project with the benefit of around 520000 US\$.”(Respondent 8, Government official, July 2015)*

Money obtained as a profit from the sales of reserve plot after recovering project cost will remain in the name of users committee. This fund would be used in future for the maintenance of infrastructure within the land pooling area. It could neither be used outside

the project area nor distributed among individual land owners. Furthermore it remains as a property of community.

Chart 1: Land use after land pooling



Source: Derived by Author (2015) from field work

There is the provision for government subsidies in land pooling as stated by National Shelter Policy 2011. User's committee has taken step for that but was lost in the midway. Moreover they calculated the project cost to ask government but they were not able to communicate.

There is the feeling among the land owners representatives in users committee that there is no equal treatment from government over the land pooling area and non-land pooling area. In non-land pooling area, where people are investing nothing, government is providing them all infrastructure. However in land pooling where people are investing everything, government is not ready to give anything, not even 50% cost sharing in any infrastructure provision.

*“There is one crucial point in LP that government's policy is weak. They do not invest anything in LP but why? This is the area where we are doing everything by ourselves and they cannot do anything. For example electrification, government does not want to invest anything but NEA (Nepal electricity authority) will collect charges afterwards. In other areas government provide electric points themselves, here we are asking for 50% cost sharing, then even they do not agree. **So there is no equality from government level (emphasis given).** There is no investment from government.”(Respondent 3, users committee, July 2015)*

Equity in distribution

There is equitable distribution of developed plots to the land owners. There is land returning policy and land is returned as guided by it (Sangacche and Gorkhali, 2003). However on site factors are also considered for it. When the area is re-plotted, the plan is published to the people and whoever is not satisfied with their new plot, they can file the complaint. Therefore there is transparency in process. The two principles, transparency and fairness, are essential in land pooling to maintain equity (Turk, 2008). In this project, government and users committee have tried to satisfy all the people and there are many cases in which they have even given people the reserve plot. Moreover it was discovered from the analysis of official documents and interviews with government officials and land owners representatives of users

committee that there is the provision to exchange the unsatisfied plots with sales plot and it has been passed in meeting as a decision.

Findings show that unfortunately project is not equitable for them whose representative is not there to make complains. So there is the risk that these people get the least preferred land even though it is unintentional. Many times when the re-plotting work is assigned to consultancy, they leak the master plan. Therefore the powerful land owners try to pressurize government for best location (Respondent 2 and 7, government official, June and July 2015). In this way there is doubt for fairness and transparency in project. Moreover in case of Nepal also inequality in benefit sharing is inevitable in many ways as said by Sorenson (2000).

For small land owners there is special consideration so that they do not get displaced. After re-plotting when the area is less than 80m²³ then the project provides them the insufficient land in a subsidised rate than the quoted price of reserve plots. For example after re-plotting if a land owner gets only 50m² of land, then he needs additional 30m² to make up 80m² of housing plot, then he can buy the remaining 30m² from project in low price. Moreover as court has ordered that no one should be displaced, in this project no one has been displaced until they themselves want to leave the project. If people want to leave the project, then project will buy the land in a market rate. Also if they are unable to buy land at once then there is the provision that they can get it in instalment. Therefore in a way project has taken care of the poor inside the project area. However these are not the poorest of the poor.

“Project has taken care for equitable distribution of land. For small land owners, we have provided facility that they can buy land in 50% less rate than the market rate. So we have internal cross subsidy for them and we are able to do this because we are in profit. We have 32 families who have cross subsidies like this. Also in the same manner there are around 200 families whose land is increased technically and for them also we provide land in subsidised rate.”(Respondent 3, government official, June 2015)

4.2.4 Factors affecting the inclusion of low income plot

This section analyses the factors that influenced the implementation of inclusionary provision in Icchangu Narayan land pooling project. Primary sources of data for this section are the interviews and official documents. Interviews were taken with the government officials related to project and land owners associated in user’s committee as explained in section 3.3.3 sampling. Likewise official documents like Detailed Project Report (DPR), progress reports, minute of meetings, tender evaluation documents were reviewed to gather the information. Also observation of the project area was done to study about the characteristics of land market and secondary data was collected from Town Development Act and land pooling manual. Moreover the data collection from different sources helps in data triangulation and increases the validity of the research. Furthermore data are analysed both from the perspective of land owners and government to find out which factors mostly hindered the government and which factors limited the landowners most.

Political will and Government’s Capability

Government’s Initiation

Government’s initiation in including low income plots within the land pooling is that they have included it in the Town Development Directives (TDD) 2005. However they have not initiated it in the field, it is only in paper. Even though the provision is there, they are practicing in a traditional way.

³ In Nepal, the minimum size of housing plot is 80m².

Department of Urban Development and Building Construction (DUDBC) bought land for low income group in Icchangu Narayan land pooling project. DUDBC was able to buy land as they convinced people by giving them high price otherwise there was huge conflict on that. In first phase, DUDBC bought land in 20% higher costs than the minimum marked price by project. In second phase DUDBC paid the minimum marked price of project but they had to promise 8m wide access road for project. Therefore the deal happened as a result of negotiation between land owners and government. As per Sorenson (2000) only politically strong government agency can enforce people for large contribution. However in this case government never talked about the inclusionary provision and asked people for contribution.

From the perspective of government official

From the analysis it was found that political commitment and strong government is needed for these kinds of projects. It requires monetary support, administrative support and police power support while executing these projects. However as in case of Icchangu Narayan land pooling project if the implementing body does not have these then local people become more powerful and it would be their monopoly in project. Therefore government has to hold back and government officials strongly argue that government cannot make decisions over public property and it would be unfair to ask them for contribution.

*“One important thing is we need government subsidy in land pooling. Government do not help in any matter. They do not give administrative support, police power at the time of need. Therefore there is monopoly of users committee and government falls back. We need strong political commitment to do the project. We can even say **there is no government in this country (emphasis given)**. This country is fully operated with the blessings of Pashupatinath (the religious Hindu god of Nepal).” (Respondent 4, Government official, June 2015)*

From the perspective of land owners

Interviews with the land owners of users committee gave the findings that most of them do not know about the provision which shows government has not really initiated it. Among five, four do not know about the provision and only one has heard of it but does not exactly know the details. They said that government has taken care of the poor inside the project but has never talked about giving land through contributions to the poor.

“I don’t have any information about the provision and also it is not included in this land pooling. Court has given decision in favour of poor people inside project that should not be displaced and they are not displaced from project. Government have taken care of that. But the inclusion of 10% is not used here. Here government has bought land to build apartment.” (Respondent 2, users committee, July 2015)

Summary

The analysis of interviews and the legal documents show that government has not initiated the inclusion of low income plots. Government officials have the view that there is poor government system and government falls back in providing any services needed for implementation. Therefore there is monopoly from the land owners. Moreover land owners also have the same view that government does not take initiations for the inclusion and most of them do not even know about the provision which they need to provide in land pooling.

Government’s Capability in enforcing the provision: Negotiation and Valuation

From the perspective of government official

Government is capable in conducting land pooling. However there is less man power in the project. There are two types of staffs in this project, one who is permanent of the Government

of Nepal and other who is recruited in contract by the project. Therefore the contract staffs are paid by the project from land owner's money and in this project there are more contract staffs than the government employees. Nevertheless since contract staffs are usually recruited through power and references, it is difficult to get experienced and capable people. Also since the staffs are paid by land owners, there is the problem that the land owners try to influence and pressurize them. Furthermore government has not negotiated with the land owners about the inclusionary provision.

Government should have trained and capable staffs to deal and negotiate for inclusionary zoning rationally (Alterman, 2012). For example they can convince them about the profits after land pooling even if they make contribution for low income plot. However in this project, government staffs view is that it is not feasible until and unless there is some government subsidy. The biggest question they have is who will pay the cost of inclusion. Therefore government has no willingness to go for the provision.

In this project, inclusion has come into place not by the provision as given by the law but by the understanding between the government and the land owners. *“Government cannot enforce the provision to land owners. The cost of inclusion will come into provision and who will pay for that. This is a different case. And I call the way **Hankey Pankey (emphasis given)**. Here government had paid for it giving the project the cost it demanded. Market rate of those lands have increased after planning but Government cannot ask people to contribute due to this reason because it is their property. We cannot force them for their property. Government have not fulfilled its responsibilities, they have not contributed anything and how can they ask to pay more.”*(Respondent 5, government official, June 2015)

Convincing people in many cases is political and for this local leaders are very important. They have capability to influence the public. Nevertheless there is gap in Nepal that there has not been local government's election from past 5-6 years. Therefore in land pooling, one local leader who can lead and bind the group strongly in local level is missing.

From the perspective of land owners

Land owners have the view that government have capability but they are weak. They lack strong leader and do not move forward as a complete package. Employees are experienced but there is no system, so it is not well managed. Respondents have the feeling that they are providing everything and there is no deficiency of budget but still the project is in delay.

“This project has to be finished in 2-3 years but still now it has not finished. So the system is too weak. Time has pushed back everything. Project has not taken anything from government, we did everything but also they cannot manage, there is no system. We have money but no system, government initiated things but it is weak. We cannot say there is no capability but there is no leader. But government has not asked us about the inclusionary provision, it was not talked. They bought land here.”(Respondent 3, Users committee, July 2015)

Government should possess good knowledge on land market and they should have the ability to assess the fluctuations in land prices so that they can negotiate rationally (Alterman, 2012). Respondents from both the government and user's committee think that government can assess land values. Values are based on the market rate and the official rate. They do not use formulas to calculate it. Further after analysis they marked the practical value in market as the minimum price for land and they updated it as per the behaviour of market. In this project the minimum quoted price of the sales plot has been revised and updated from 140 US\$ per m² in 2005 to 263 US\$ per m² in 2014. However from the beginning they cannot just make an assumption that price would be highly increased as there is no certainty in market.

Summary

From analysis it was found that most of the project staffs are recruited in contract from project's fund. Since contract staffs are mostly recruited through recommendations from higher officials and powerful landowners, it is difficult to get experienced and reliable employee. Also for the fact that they are paid by landowners, they held themselves back to negotiate with land owners. On top of that there is no willingness from government employees; they have the view that land owners should not be enforced for inclusionary provision until there is some subsidy from government in land pooling. Nevertheless land owners have the view that government employees have capability but there is not good management system in government. Moreover findings show that a strong leader is missing in the project. Regarding the valuation of project, it was found that both the groups of respondent have the view that government have the capability to assess land values based upon the land market rate and the official rate. However there is no specific formula for that, it is done in a practical way.

Transparency and Accountability

From the perspective of government official

The work of Kathmandu Valley Development Authority (KVDA) is transparent in land pooling. Transparency is important to avoid the legal challenges and to maintain smooth implementation (Alterman, 2012). According to TDA 1988, all the financial documents, progress reports and auditing should be done as per the rules of Government of Nepal. The works in land pooling is more transparent than government's other work as here they have to answer the local people. For every fiscal year, work is started after passing budget from the two committees. Moreover nothing is passed from management committee until and unless it is passed from user's committee. Therefore it is transparent. Also every year they have to provide all the details to both the committees. However the information is not provided in the individual level. Furthermore it is the duty of user's committee to disseminate the information at the local level, other than that they are accountable on what they did. Since the account is transparent, all works are done in optimum cost and they are able to provide more infrastructures than in detailed project report. There is no misuse of land owner's money.

From the perspective of land owners

Land owners also feel that the work is transparent as all the infrastructure work and sale of reserve plots are done through tendering. It is all done publicly. However sometimes there is delay from government to give information otherwise they can get the desired information.

"Yes there is transparency in government's work. Sales plot are sold through the mechanism of tendering. So it is transparent. The work of infrastructure is also done through tendering, it is also transparent. We can also get information about everything. But sometimes it is late, so some problem also."(Respondent 2, Users committee, July 2015)

Summary

It was found that both government official and land owner's representatives in users committee have the same view that the work is transparent as all construction of infrastructure works and selling of reserve plots are done through tendering. Every year project has to pass budget from management sub-committee and users committee and provide the details to both at the end of fiscal year. Moreover every decision has to first pass from user's committee before putting forward to management committee.

Land market conditions: Before and after

Growing city with the demand of serviced plot and active land market is the important preconditions to be met for land pooling (Mittal, 2014). In case of Nepal, among the technical criteria used in selecting area for land pooling as mentioned in section 4.1.1 above is to determine growing area. Therefore area has to be growing to be selected for land pooling. Icchangu Narayan was also a growing area at the time of project initiation. It is just 15min walking distance from ring road and plotting of agricultural land by local land owners and land brokers had already started in the area and they were trying to create land market.

Though the area was a growing area and ripe for urbanisation, demand of land and land prices of the Icchangu area was less in comparison to the surrounding areas. Nevertheless prices went up gradually after land pooling. Respondent 2 from government said that, “*The area is a growing area and there was the demand of land also but not as today. Initially it was difficult to sell the sales plot as people are waiting for infrastructure to come.*”

Picture 2: South East view of project area



Picture 3: South West view of project area



Source: Author (2015), observations from field visit

Picture 2 and 3 above and picture 4 and 5 below shows the present condition of the area. From 82 houses recorded in the Detailed Project Report (DPR), situation today is as demonstrated by the pictures with many newly constructed and under construction houses. Furthermore this shows that the area is growing and there is high demand for housing plots. Also building in red box in picture 2 and 3 are the apartments build by government for low income group in first and the second phase respectively.

Picture 4: South view of project area



Picture 5: North view of project area



Source: Author (2015), observations from field visit

Land pooling is a value increment project through the change in land use from agricultural to urban use (Sorensen, 2000, Mittal, 2014). In this project also land prices started increasing as land pooling proceeds. Prices started going up by multiple folds; result being the project had already cleared its loan. At the time of preparing DPR, the minimum marked price by project per m² was 140 US\$ and now the price has increased to 263 US\$ per m² (Refer Annex V for the adjusted land prices with inflation). Furthermore comparative chart of procurement document shows that the buyers are quoting up to 42.77% higher than the minimum quoted price by project which shows there is a lot of competition and demand in the area.

From the perspective of government official

Since land prices have gone up, values of sales plot has increased providing project excess fund. Therefore it is now providing more infrastructures than in DPR. In DPR the land owner's contribution was able to provide only gravel road but as per minutes of meetings and interviews with government official, project is now providing black top road with electrification and telephone lines. Moreover project staffs believe that at the end, project will be in profit of over 520000 US\$.

“The prices of land have increased drastically (emphasis given). The prices of land increased gradually with the planning and we updated our official price for land as well.” (Respondent 2, Government official, June 2015)

Land registration fee within the land pooling area is free. Therefore people put this amount as well in price of land to get the better location and to be in competition. Also they prefer land pooling because it is safe and they would not be disguised by the brokers.

“.....but now while tendering we are getting it above 40%. In individual market it is even more than 394 US\$ per m² (12/13 lakhs Rs). I think we can handover project to people with around 520000 US\$ (5 crore Rs) plus (emphasis given). In LP, people do not have to pay registration fee. So that also they put in land's value to get good locations. Also people feel it safer, so there are many demands.” (Respondent 8, Government official, July 2015)

From the perspective of land owners

It was found from the analysis of the interviews with land owners that demand is high in the land pooling area because the buyers know that it is a planning area and there is a system. They feel it safe to invest there from physical as well as from financial point of view that the documents would be all authentic and they would not be disguised. As explained by land owners, in the beginning neighbouring areas had double price than this area but now this area has twice the value than the surrounding area. Therefore they are hoping to have extra saving and construct community building in their area.

“..... They have black top road, till now we have only gravel but still our value is high. Because the buyers know here we have system (emphasis given). Now the rate is much higher than the rate of DPR, around 5 folds. So we are now providing many infrastructures than in DPR. And we are hoping that we will have extra saving at the time of completion which we will use in maintenance and construction of public spaces like community building.” (Respondent 3, users committee, July 2015)

Users committee is responsible to give recommendation for transfer and sale of land within the land pooling area. After their recommendation only KVDA can forward the file to district revenue office for the sale of land. It was found from the interview with land owner in users committee who is responsible for giving recommendations that since the demand for land is increasing, they are giving 5/6 recommendations per day and it is very difficult to get small plots of around 170 m².

“Automatically prices have increased..... There is lots of demand, we cannot find small plot of 5-6 anna (158-190m²)(emphasis given). Per day we are giving 5/6 recommendations for selling, I myself give recommendations for that.(Respondent 1, users committee, July 2015)

Summary

Analysis shows both the groups of respondents agree that there is the high demand for the land within the land pooling area and the land prices has increased drastically. However in the initial phase it was difficult to sell the reserve plots as buyers were waiting for infrastructures. Later on project took the pace of increasing demand and now it is in profit. Moreover since the project has enough funds at present time, they are providing more infrastructures within the area like black top road, electrification and telephone lines etcetera.

Public support for inclusionary provision

From the perspective of government official

It was found from the interviews and the minutes of meetings that government did not ask people to contribute land for low income group as a provision given by TDD 2005 but they asked them to sell the reserve plot to government for low income group. Nonetheless people did not agree with the proposal and there was a huge conflict on that. Delegations of people came to office as a protest and neighbouring plot holders of the area even filed case in the court. Moreover they were worried that it would affect the safety and security of the area and their land values will go down. In many developing countries, reason for walled gated community is argued for security (Webster, 2001, Atkinson and Blandy, 2005). Here also people thought that this will increase crime in their area which would affect their children.

Department of Urban Development and Building Construction (DUDBC) had planned to bring people of squatter settlement⁴ in the land pooling who were displaced due to government project. However when there was no public support, government handled it diplomatically. They convinced people that government is bringing low income group people and not the squatters. However interviews by policy level government official in national newspaper clarifies that the project is actually intended to the squatter people who was displaced from the Bagmati river bank at Kathmandu (The Kathmandu post, 2010). Also the government made a deal with land owners paying them as per their demand.

“There was huge disagreement They have no work and where will they go to work, so it will increase robbery in their area. People said that if government give them job then we will agree, if not where they will work, it will increase theft in their neighbourhood. They will even teach our children for burglary.”(Respondent 7, government official, June 2015)

From the perspective of land owners

It was found that there is now mixed type of feeling among the land owners. In the beginning there was a complete negative feeling but after negotiations, people are not that dissatisfied. Moreover when DUDBC constructed good apartment building, then people have started taking it positively. People do not want inclusion because they want to control their residential environment (Webster, 2001). In this case also local people were afraid that the living standard of low income group will damage the environment but after construction of apartment, people are now thinking that the poor ones cannot live in a nice building like this.

⁴ Squatter settlement is the settlement in an illegally encroached land and squatter people are the people living in these settlements. These settlements are known as *Sukumbasi Basti* in Nepal and people living there is identified as *Sukumbasi*. Squatters are the people who do not own land throughout whole Nepal.

*“In the beginning there were conflicts that government is bringing squatter people. **They have fear that they will live in huts and our neighbourhood will be damaged.** So the neighbouring people of that plots filed case in court. They said that it will decrease their land values, squatters will bring criminal people there. Few people who are intellectuals said that poor are being brought by government so if government is doing this then there must be some analysis; it will not be that scary. Government has built apartment, a good building, so people are not that dissatisfied.”(Respondent 2, Users committee, July 2015)*

Some land owners in users committee think that for government’s policies they cannot say complete no if government managed things properly. Land owners actually agreed because the deal was profitable to them. With government’s proposal they got both the seed money for project and the access road. Minutes of meeting has recorded that in first phase DUDBC bought the land for apartment construction to low income group in 20% more price than the marked price of project and in second phase DUDBC bought land in the marked price of project but with the promise of providing 8m wide access road to project. Furthermore their concern on safety, security and land values was also taken care with government’s change in proposal from squatters to low income group and construction of apartment building for low income people.

Summary

Analysis shows that government has bought the land for low income groups in a higher price than the minimum quoted price of project and they never ask landowners for the contribution. However land owners did not support government’s proposal in the beginning and there was huge conflict on that. Both the groups of respondent have the view that land owners did not agree because they are worried about the safety and security of their area. Also they were afraid that the environment of their neighbourhood would be ruined by the lifestyle of poor inhabitants. Furthermore land owners agreed after negotiations when government handled the case diplomatically and when the deal appeared to be profitable for them.

Land owner’s contribution

In this land pooling, land owners have contributed 29% of land as a contribution to get a planned area. They have managed to decrease the contribution to this value of 29% after many negotiations with the government. There was a court case that the contribution percentage is high in the project and people agreed to participate only when the court gave the decision to decrease the contribution. Therefore it was found that if contribution was made higher than this then people would not participate in the project.

From the perspective of government official

Inclusionary zoning can work out well if there is good land market because high value plots will subsidise the affordable plots (Mallach, 2010). Nevertheless in this research, respondents have the view that project could not be designed in a way that the cost of low income plots would be covered by the high price of sales plot. Land market is very uncertain and decisions could not be taken based on that. It cannot be assumed that project can have cross subsidy for low income plots through the high price sale of reserve plots. Moreover there are cases in land pooling in Nepal when land pooling could not increase the demand of land and it became difficult to sell the sales plot. Therefore it would be very uncertain to assume that low income plots could be covered by the sale of reserve plots in a higher rate. Furthermore inclusionary provision would increase land owner’s contribution which means in this case it comes out as a punitive tax to the land owners. The findings show it is in line with the view of theory that inclusionary zoning works as a tax on new development which results in the reduction of developer’s profit (Powell, B. W., 2013).

“Project has to increase the contribution ratio of the landowners if they want to include low income plots. Now the price is high but it was not confirmed from the beginning (emphasis given). If today contribution ratio is made low to get acceptance of project and if in future land prices will not increase, then what could be done, there is a big risk. Only if in the start of project contribution ratio is less it will attract people otherwise it is very difficult to convince people.”(Respondent 8, Government official, July 2015)

From the perspective of land owners associated with users committee

According to land owners there could be two things if low income plots are included through provision. One is that it would increase their contribution percentage as there is no guarantee that low income plots could be paid through market. Other is that there would not be good infrastructures and they would have to stick up with the ones provided in DPR. This means that there would be only gravel road and not the black top road. If the cost of constructing complete infrastructure is not included in land pooling then it burdens the government delaying the development of area which implies that construction of infrastructure completes the project with full service land (Turk, 2007, Turk, 2008). Therefore infrastructure is also important part for success of land pooling. Nonetheless land owners feel that if there would have been good system with strict government policy, then people would have to agree with this. They now have the feeling that there is not system for anything.

*“It will increase the contribution ratio and people will not agree on that. Our ratio is tight of sales plot. In the beginning there was conflict that contribution is high, later it was decreased from 45 to 29%. Also the cost of infrastructure has increased. So there is no point in giving land to poor. Project cannot sustain that. **Increasing contribution from even from 29% to 30% is almost impossible (emphasis given).**” (Respondent 2, user’s committee, July 2015)*

Summary

It was found that both land owners and the government officials agree that contribution percentage has to be increased from the beginning in order to compensate for low income plots. It could not be subsidised through the market rate buyers as land market is very uncertain and there are also cases in past when land pooling was not able to sell the reserve plots. Moreover land owners have the view that if contribution percentage is to be kept constant then they would have to compromise with the quality of infrastructure to pay for low income plots. Otherwise it is not possible to extend the contribution even by one percentage.

Land Values after the inclusion of low income plots

From the perspective of government official

Analysis of the interviews from government official’s show that construction of apartment building by Department of Urban Development and Building Construction (DUDBC) has not brought the feeling that poor people will live there. Low income plots have never decreased the values of land in the area, after inclusion also there is the demand for land equally. Moreover evaluation of bid documents show high quotations from buyers which confirms demand is still high.

“Low income plots did not decrease the land values, it has not done anything. Price is going up and up. The case is already handled diplomatically. Looking at apartment building, people have started saying that only people with cars can live there.”(Respondent 8, government official, July 2015)

From the perspective of land owners associated with users committee

It was found from the interviews of land owners that inclusion did not affect the land values

but it has brought curiosity and tension in people's mind that who will come in their community. People have read in many newspapers that government is bringing the squatters of Bagmati River but government had said it is not squatter but low income group. Therefore it is not clear. Some land owners think that there is some defect in policy itself. Additionally government also did not come forward and said this is the policy which everyone has to comply which shows government its weakness. If there would have been strict policy then people would have to agree with it. Moreover as per land owners, government's regulation should be uniform in whole country and there should not be the biasness that they become the only group who has to pay for low income plots.

"There is not the decrease in land prices. But the problem is who is poor and who will get that apartment. We are curious and worried. The question arises why we are the one who has to give subsidies. It would be better if whole country contributed 10%. I am not against poor; I supported government when they are building apartment. But government also has to make good policy. If government enforced then we cannot say no but government's policy itself is weak. Government also should be able to say that you are capable and have to contribute but they did not do that."(Respondent 3, User's committee, July 2015)

Summary

It was discovered from the analysis of interviews of both group of respondents and the official data that land values had never decreased in the Icchangu area once land pooling has started there. Therefore low income plots have not influenced the land values of the area. However there is tension among the land owners regarding the upcoming so called low income people in their neighbourhood. Moreover analysis shows that users are dissatisfied with the government's system and policy. They argue that government's regulation should be uniform in the whole country and not forceful to them only.

Summary

Primary data collected from government officials of Department of Urban Development and Building Construction (DUDBC) and Kathmandu Valley Development Authority (KVDA) who are associated with the implementation of Icchangu Narayan land pooling project and land owners who are associated with the users committee of this land pooling project provided the useful findings for the analysis of this research. Interviews were again clarified and strengthened through the review of official documents like Detailed Project Report (DPR), progress reports, minute of meetings and tender evaluation documents. Furthermore secondary data sources like the related acts and regulations, land pooling manual etcetera provided the research with important data which also helped in data triangulation to increase the internal validity of this research. From the analysis of all these data it was discovered that the provision for the inclusion of low income plots in the land pooling project is not designed in a practical or implementable way. It is designed more as a political tool which is not real from the beginning. Moreover the inclusionary provision is not institutionalised properly; rather it was found that the documents are contradictory to each other and lack clarity in defining important terms like poor, inclusion etcetera.

Icchangu Narayan land pooling project is found to be implemented successfully after numerous negotiations. Initially it went out through court cases and conflicts but now it is in finishing stage with the profit. However despite its capability, project did not fulfil its social duty of providing merit goods that is the low income plots. Further, the analysis shows different factors have influenced the abandonment of the inclusion of low income plots in the land pooling.

It was found that for government, political will and government's capability is the most hindering factor. Among eight respondents, seven voted it number one while one rated it as second as shown in table 12 below. The inclusionary provision is initiated in the documents but government has not initiated it in the field. Analysis shows that government system is weak and they do not provide any support for project implementation making land owners more powerful. Further the legal documents are not found to be well designed and it is not 100% enforceable which has also influenced strongly the implementation of inclusionary provision. Table 12 below presents the ratings of factor by the eight respondents from government side in which 1 is the most hindering factor and 6 is the least hindering factor. These eight respondents are the government officials including higher level officials who are policy makers and middle level working staffs associated with the project.

Analysis of data shows that contribution percentage and public support equally hinders the government for the implementation. Respondents interpreted that when contribution is high then there would not be public support. Increasing contribution from 29% to 30% is not found to be convincing to land owners. Moreover land market conditions of Icchangu area was found to be good as there is the increasing demand for land. However market is not predictable from the beginning and it cannot be relied upon to compensate the cost of low income plots. Therefore though it seems land market has not affected the provision as most respondent voted it least bothering factor as shown in table 12 below, it was found that in the initial phase it has influenced the provision.

Table 12: Ratings of factors by government official

Factors	Ratings of factor (Government official)					
	1	2	3	4	5	6
Political will and government's capability	7	1				
Legal and Policy framework	3	1	1	1	1	1
Public support for inclusionary plots	1	3	2	2		
Contribution ratio		3	4	1		
Land values after inclusionary provision			1	2	5	
Land market conditions			1	1	1	5

Legend	
1	
2	
3	
4	
5	
6	

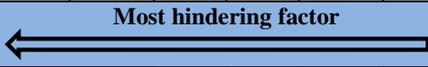
Note: Number in the colour boxes represents the number of votes for respective factor, total number of respondent =8.

Source: Author (2015), derived from interviews with government officials

For the land owners it was found that the most hindering factor is the lack of public support for inclusionary provision. People do want to participate as they are afraid that with the inclusion, crime would be increased in their area and there would be security problem in their area. Further they do not want to participate because it would increase their contribution. Therefore increase in contribution also equally limited the land owners towards the provision. Table 13 below presents the rating of factors by five respondents from users committee in which 1 is the most hindering factor and 6 is the least hindering factor. These respondents are the landowner's representatives that are associated with the user's committee which was formulated for the effective implementation of Icchangu Narayan land pooling project. Moreover these respondents hold important positions in the users committee as explained in section 3.3.3 sampling and they are educated people for example principal of secondary school in the area, retired army officer etcetera.

From the analysis it was found that land owners have the view that government is weak and project lacks a strong leader. They feel there is biasness between land pooling and non-land pooling area from government side that government does not provide any support in land pooling area. Therefore political will and government’s capability has also bothered them. Most of the land owners are not aware of the inclusionary provision in the legal documents, so they did not have specific view on it. However they feel that government’s policy is weak and it is government’s weakness that they are not coming forward to ask them for provision.

Table 13: Ratings of factors by land owners

Factors	Ratings of factor (Users committee)					
	1	2	3	4	5	6
						
Public support for inclusionary plots	3	2				
Contribution ratio	1	3	1			
Political will and government’s capability	1		1	3		
Land values after inclusionary		1	3		1	
Legal and Policy framework				2	3	
Land market conditions						5

Legend	
1	
2	
3	
4	
5	
6	

*Note: Number in the colour boxes represents the number of votes for respective factor, total number of respondent =8.
Source: Author (2015), derived from interviews with land owners*

Regarding the land market, it was found that the land owners are happy that there is high demand for their land. Even after the inclusion, land prices have not fallen down. Therefore looking at the current situation, it seems as if these two factors: land market conditions and land values after inclusion have not bothered land owners. However it has influenced in the initial stage of decision making. Initially they did not agree for the provision as they thought this would ruin their neighbourhood and decrease their land value. Also today's land market cannot be predicted in the past which makes it difficult to decide that market can pay for low income plots. Besides all these factors obtained from the theory, this research has discovered another factor: decrease in infrastructure quality which also influences the inclusionary provision. It was found that if contribution has to be kept constant with the accommodation of low income plots, then the project has to compromise with the quality of infrastructure works. Therefore with this land owners are worried that they would then have to stick up with the gravel roads only which means incomplete infrastructure within the area.

Chapter 5: Conclusions

This chapter answers the questions raised at the beginning of this research. First the four research sub questions will be answered one by one based upon the data analysis and findings collected from field work. Moreover it would be done interpreting it with the theories of chapter two. Then the main research questions would be answered by summing up the findings of four sub questions. After that conclusions are made regarding the value capture from this land pooling project and its effect to low income group. Finally this would conclude the queries of this research work with some recommendations for future policy makers of Nepal along with some scope for future researchers.

5.1 Legal and Policy framework for the provision of 10% low income plots in land pooling projects at Kathmandu

Land Pooling in Nepal started with the enactment of Town Development Act 1988 and there are enough supporting legal documents for land pooling. For successful land pooling programs legal framework is important as it protects the property rights of land owners (Turk, 2008). However for inclusionary zoning, things are not very clear. Inclusionary provision of low income plots in land pooling is mentioned in Town Development Directives (TDD) 2005 and National Shelter Policy (NSP) 2011. Nevertheless these two documents are contradictory. According to TDD low income plots should come as land owner's contribution whereas according to NSP government should develop internal funding mechanism to subsidize low income plots.

Affordable housing is targeted to those people who fall under the officially defined income level by country (Calavita and Mallach, 2010). In case of Nepal also it is targeted for people who are below poverty line and for excluded group. However the problem is that it is being difficult for line ministry and implementing body to identify poor. There is no explicit provision to define who is poor and who should be included in the inclusionary provision.

Kathmandu Valley development Authority (KVDA) is responsible for conducting land pooling inside Kathmandu valley but it does not have power of land acquisition. For land acquisition and for many other works it has to deal with different government organisations. It becomes difficult to coordinate when there is interruption in work until those organisations get satisfying allowances. Therefore there is also problem among government organisations.

KVDA can enforce low income plots to land owners from TDD section 5.2 that "up to 10% of the reserve plots could be allocated for low income group and the excluded people". Nevertheless the status of the document is not 100% enforceable for the fact that it is a working directive which is only passed from line Ministry. It is not an act and regulation which is passed from cabinet. Moreover internationally, inclusionary zoning has legal status and comes under land use regulation (Calavita and Mallach, 2010). Also as per Calavita and Mallach (2010) usually the percentage allocation is between 10% and 20% but in Nepal's case it is "up to 10%". Therefore there is room to play and interpret that the percentage could be as low as one.

The language used in the document that "could be up to 10%" does not express it as compulsory. Mandatory programs are found to be more successful, even more when it is tied up with the enforcement mechanisms like financial sanctions like fines (Brunick, 2004, Lerman, 2006). However in case on Nepal, there is no any such mechanism through punishments and fines. Moreover the provision is neither voluntary because it does not provide any incentives to land owners to encourage the provision. As per (2004) voluntary

programs are tied with cost offsets and incentives and these are also successful with the subsidies. Therefore it could be concluded that the provision is not well designed.

Within this legal and policy framework also it is found that government employees feel that the provision could be enforced if government shows willingness and takes strong decision. However they do not see the practicality of the provision and present the view that it is unfair to take everything from public when government is not putting any share.

5.2 Implementation of Icchangu Narayan land pooling project

Icchangu Narayan land pooling project is being implemented in 30.9 hectares of land by Kathmandu Valley Development Authority (KVDA). It is a large project with 924 plots after re-plotting with over 500 land owners. The project has two committees, management sub-committee from government side and user's committee from land owner's side. Moreover there are project staffs who work on ground to implement the project. Every issue is firstly passed from the users committee before reaching to the management subcommittee for final decision. The role of users committee is very important in motivating and convincing land owners. However it is found that user's committee lack expertise and capability and they themselves urge local people and send them at KVDA to pressurize the government.

According to Hong (2007) cooperation and participation is the base for land pooling in which coercion is the last option. In case of Nepal, to start land pooling application from 51% of land owners is needed. Practically getting this supermajority is difficult, so the opposite path is adopted. When the complaint of not joining the project is less than 49% then the project is announced as approved. Therefore in a way Nepalese case forces land owners for the project which impacts project implementations with the court cases.

This project was on hold for 2/3 years due to court cases. The cases were resolved when the court gave decision that land pooling should be conducted but with the two clauses. Clause 1 being, there should be no displacement of any land owners from the project and clause 2 is contribution should be reduced.

In land pooling, land owners are convinced through the number of public hearings (Turk, 2008). In this case government mostly dealt with users committee and they convinced the local land owners. In a way this method is efficient. However due to this land owners felt there was not transparency and filed case against the project. Later on negotiations took place with many formal and informal meetings. Moreover convincing was done politically. As per Karki (2004) and Turk (2007) experienced personnel and managers are important in land pooling for negotiation. Nevertheless in this case land owners have the view that the project lacks good leader. Furthermore land owners are very powerful and it is natural as they are paying for everything from infrastructure fee to administration costs including the salaries of staffs. They have contributed 29% of total area, 6% of which is the contribution for reserve plots to recover the project cost. Also they paid 12% interest to the loan as initially project was operated taking loan from KVDA. Nonetheless respondents feel that it is unfair to pay interest to government when land owners are paying for everything. Otherwise as stated by Archer (1992), land pooling projects are usually financed in the beginning through loan.

Now the project is in profit as there is the high demand for land and the strong part is the money gained from the project could be utilised within the project only. However there is the feeling among users that there is discrepancy between land pooling and non-land pooling area from the government because in non-land pooling area government provides all the infrastructures. However there is the provision for subsidy in land pooling in National Shelter Policy but it is not being executed. Therefore respondent argue that since government is not fulfilling their responsibilities, they cannot ask land owners to contribute for low income plot.

The project is equitable for majority of land owners in terms of both location and size. For maintaining equity, transparency and fairness are needed (Turk, 2008). Regarding transparency, there is the provision of publishing the re-plotted plan so that the unsatisfied land owners can give feedback on that. Regarding fairness, project ends up being unfair to those whose representative is absent to make complain, though this is unintentional. In land pooling inequality in benefit sharing is inevitable in many ways (Sorensen, 2000). This could be implied in this project as well. Moreover the consultancies involved in re-plotting leaks the plan resulting pressures to the government from powerful land owners for good location. In conclusion this project could be considered implemented successfully which has full cost recovery, which has participation and which is equitable in many ways. However it does not meet the social need of affordable plots despite its capability.

5.3 Hindrances for the government to incorporate the inclusionary provision in the Icchangu Narayan land pooling project

Analysis done in chapter four gave the conclusion that the most hindering factor for government is Political will and government's capability. The government has not initiated the inclusionary provision on ground and they are practicing in a traditional way. It was found that the system of government is very weak. Government does not provide financial support, administrative support and policy power. Therefore land owners are very powerful over them. In land pooling, large contributions could only be enforced by politically strong government (Sorenson 2000). Also as per Alterman (2012) government should have trained and capable staff to negotiate inclusionary zoning. However in this case most of the staffs are in contract paid by land owners, so they lack competence and they cannot negotiate. Moreover government held themselves back as they feel they do not have rights to decide on others property.

Government employees are not willing to ask for contribution and government bought land from the project for low income people. Even then there was not support from public for this and they filed case in the court against the proposal. In many developing countries people living in a gated community argue that for security reasons (Webster, 2001, Atkinson and Blandy, 2005). In this case also land owners are concerned about the safety and security of their area. Moreover they are worried that it will increase crime in the area. Therefore lack of public support is another hindering factor for government.

Government is also hesitant because the cost of inclusion will come into play and land owner's contribution will be increased. Land market of the area is good as there is high demand for land. Nonetheless it is not possible to design project in a way that cost of low income plots would be covered by the high rates of market rate buyers. This is not in line with the theory that high market value can compensate low value plots to make inclusionary zoning successful (Mallach, 2010). However it came out as a punitive tax to the land owners upon land development that it lowers their profit when they have to pay for inclusion (Powell, B. W., 2013). Moreover in case of Nepal, land market is not predictable and there are many cases in the past whereby reserve plots are not sold from land pooling. Therefore contribution has to be increased in order to compensate low income plots. However if contribution is high there would be objection from public and project would be abandoned.

Once land pooling was implemented at Icchangu Narayan, there was the gradual increase in land values. So the demand for land is very high in the area. The theory that land pooling is a value increment project through the change in land use as mentioned in Sorenson (2000) and Mittal (2014) has proved to be true in this case. Furthermore the inclusion of low income plots has never decreased the demand and the land values. Nevertheless people were afraid in the beginning that inclusion would decrease the values. Therefore political will and

government's capability along with weak and contradictory policies and lack of public support as there would be increase in land owner's contribution have highly hindered the government for the implementation of inclusionary provision in Icchangu Narayan land pooling project at Kathmandu. However the two factors: land market conditions and effect on inclusionary plots is now found to be perfect, it has influence in the initial phase to discard the inclusionary provision in this land pooling project.

5.4 Hindrances for the land owners in providing the inclusionary low income plots in the Icchangu Narayan land pooling project

The fear of the increase in contribution is the main limiting factor for land owners as they have to bear the cost of inclusion. To pay the cost of low income plots, either their contribution would be increased or their infrastructure could be decreased. In both the cases land owners are the one who have to bear the cost. Therefore there is no public support for the provision. This comes in line with the theory that any increase in land owner's contribution makes the project less attractive for them (Sorensen, 2000). Further public support is not there because they are afraid that the living environment of low income people would ruin their neighbourhood. In theory as per Wester (2001), people do not want inclusion as they want to control their built environment. Moreover people are worried that this will bring crime like robbery in the area and there would be no security for them and their children.

Initially land owners were afraid that the inclusion will decrease their land values. However land prices never decreased within the area and demand kept on increasing. Despite this land owners are afraid about the people that will move into their area. They are curious to know who these people are. Government has told them they are bringing the low income people but from newspapers they were informed that they are the people living in the squatter settlements of Bagmati River. Therefore it is ambiguous and they are tensed about their new neighbours.

Another factor is political will and government's capability. Landowners feel that the government is weak and project lacks a good leader. However leadership and willingness of implementing agency is essential to make communication and deal with the rigorous process of land pooling (Mittal, 2014). Moreover in case of Nepal there is lack of good government and management system. They have the feeling that there is biasness from government side between land pooling area and non-land pooling area. The government does not contribute anything and they have to bear the cost of everything. Even though there is provision of subsidies they are not getting it, so they are also not willing to contribute for inclusion of low income plots.

Land market conditions did not bother the land owners as the demand for their land is increasing day by day and users committee is busy giving 5-6 recommendations per day. Nevertheless in the beginning there was not much demand. Now they are happy that project is in profit and they are getting more infrastructures than intended at the beginning. Besides this, paying low income plots through market rate buyers is not found to be feasible as prior judgement on market is risky. Therefore though market conditions are good in present time, it has influenced over discarding the provision. Inclusion more came out as a punitive tax to the land owners as explained by Powell, B. W., (2013) that with this their contribution would increase and they would have to compromise their profit. To conclude, increasing contribution percentage and decreasing public support has greatly limited the land owners for the provision. Fear of decrease in land values is another bothering factor while government policy and system also did not encourage them towards the provision. Also land market conditions influenced the land owners to go against the provision. Moreover these six factors

are confirmed with the theory while another factor was discovered from the field work that decrease in infrastructure quality has also affected in the abolition of inclusionary provision.

5.5 Factors that influenced the abandonment of the inclusion of 10% low income plots in the Icchangu Narayan land pooling project

Theoretical chapter of this research has identified six important factors which influence the inclusionary zoning provision in the land pooling projects. The six factors are legal and policy framework, Political will and government's capability, public support, effect on land owner's contribution, effect on land values after inclusion and land market conditions. Moreover two of the factors political will and government's capability and land market conditions are the preconditions needed for the successful implementation of inclusionary zoning and land pooling. However this research has concluded that there is no political will and government's capability. Even though the government has initiated the inclusionary provision of low income plots in paper, they are practicing in a traditional way. They did not take any initiations to get the low income plots as a provision. Moreover government has not provided the needed support (financial, administrative, police) for implementation. Furthermore there is monopoly from powerful land owners as everything in project is invested by them and government falls back in enforcing the provision.

The inclusionary provision is not found to be institutionalised properly in the legal and policy framework. The vagueness and the contradictions within the policy and legal documents exhibits that the provision is not well designed from the beginning. One of the most problematic issues is about the status of the document that Town Development Directive (TDD) is just a working directive and its level is not high as acts and regulations. It is only passed from Ministry and not from the cabinet. Second issue is about the language used. It states that "up to 10% of the reserve plots could be allocated for low income group". Therefore the provision is not mandatory for the land owners and also there is absence of enforcing mechanism like fines for this. Moreover the provision is also not voluntary as there is no complementary instrument like cost offsets or incentives to promote it. Also there is no clear definition for poor and the inclusion which makes the document difficult for implementation. However it was found that if the government takes strong decision and shows willingness, they can still make enforcement. It could be concluded that the inclusionary provision is designed as a political tool not intended to be real from the beginning.

Effect of inclusion on land owner's contribution is another important hindering factor. Initially this project had court case and it was only resolved when the court gave decision that contribution should be decreased. The project was started when the contribution was decreased to 29%. Therefore it is not possible to increase contribution even from 29% to 30%. If contribution is increased then there would not be public support. On the other hand if there is inclusion with 29% contribution, then the project has to decrease the infrastructure quality which again public will not support. Also incomplete provision of infrastructure is a burden to government. Further this research has made conclusion that decrease in infrastructure quality is another factor which has influenced the abandonment of the inclusionary provision.

Public support is another factor which has hindered the implementation of inclusion of low income plots. Moreover people were against the provision because they were worried about the safety and security of their area. The other reason for having difficulty to get public support is that people have the feeling that their land values will be decreased after the inclusion. However the analysis reveals that there was never decrease in land values. Even though land values never took downward pace after land pooling, it has influenced at the

beginning to go against the inclusionary provision. Nevertheless still people are curious and tensed about the new inhabitants of their neighbourhood brought by the inclusion.

Land market of Icchangu Narayan does not seem to be a problem in current situations as there is high demand for the land and the project is going in profit. Nevertheless at the beginning it was difficult to sell the reserve plots as buyers were waiting for infrastructures to come. Also the cost of low income plots could not be compensated by market as market is very uncertain. Therefore in initial phase land market conditions has also influenced towards forbidding the inclusionary provision. Since it could not be compensated through market, it came out more as a punitive tax to the land owners as they have to compromise their profit to incorporate the inclusion.

In conclusion the factors that have influenced the abandonment of the implementation of the inclusion of 10% low income plots at the Icchangu Narayan land pooling project are Political will and government's capability, legal and policy framework, public support, effect on land owner's contribution, land values after inclusion, land market conditions and effect on infrastructure quality. The first four factors: Political will and government's capability, legal and policy framework, public support, effect on land owner's contribution have greatly hindered the implementation which is confirmed with the theory. However the factor, effect on infrastructure quality which is also important is discovered from the field work. The two factors which theory suggests: land market conditions and effect on land values do not come out as a hindering factor at the current stage as in this case land pooling proved to be a value increasing project as expressed by Sorenson (2000) and Mittal (2014). However these two factors have influenced the abandonment of the inclusionary provision in the initial phase.

5.6 Land Value Capture through Icchangu Narayan Land Pooling Project

Icchangu Narayan land pooling project is a successful project in terms of developing agricultural land into urban land with the urban infrastructures. This project is a self-reliant project in terms of financing infrastructure and bearing other administration costs. Therefore it confirms with the theory that land pooling is a self-financed land management instrument (Sorensen, 2000, Mittal, 2014). Government is able to capture the increment in values through the land owner's contribution of land for road and open spaces. Also government captured the values through the cost incurred in construction of infrastructures and administration of project which became a panacea for government to overcome the constraint of capital fund deficiency. Land owners contributed 70740 m² of land for road and open space which means government captured the value equal to amount 18604620 US\$ (1m² costs 263 US\$) from it.

Construction cost and other overhead/administration costs including the salaries of staffs are governed by the sale of reserve plots which is again value capture from government. However the value increment of the developed land in land pooling by the infrastructures is much more than the cost of these provisions (Sorenson 2000). In this project also the prices of land has been increased in multiple folds due to land pooling and government has not captured to its full potential. From interviews with the government officials and land owners representatives of the project which was also clarified from the progress reports, it was found that the land owners are very happy as the market price of land has increased and the project is in profit. Moreover they were confident that the project will have profit of over 520000 US\$ from the sale of reserve plot. This amount could actually be captured by the government to cross subsidise the low income group people but government falls back in this. Therefore the project does not fulfil its social duty of providing low income plots to poor.

This land pooling project has the potential to incorporate the ideas demonstrated by Turk and Korthals Altes (2010, p.329) that land pooling can be designed with different approaches for the provision of low cost housing like selling land in a reduced price to agencies producing affordable house with cross subsidy from higher rate market buyers, allocation of surplus from increment in land values for affordable housing, and increasing the contribution from the land owners to accommodate the low income plots. Nevertheless none of these were used as a solution to address the issue of affordability to low income groups and government bought land from the project for poor which goes against the idea of using land pooling as a self-financed tool to overcome the budget deficiencies of government. The inclusionary provision given by Town Development Directives 2005 that “up to 10% of reserve plots could be allocated for low income group” was never captured by government and remains as a symbolic gesture only.

5.7 Effect of Icchangu Narayan Land Pooling Project on low income people of Kathmandu

Icchangu Narayan land pooling has proved to be a typical land pooling project which has increased the values of land through the change in land use. The project has managed to increase the demand for land at the area increasing the official rate from 140 US\$ per m² to 263 US\$ per m² which again at individual level is above 394 US\$ per m² (Refer annex V for adjusted land prices with inflation). This implies that this project is also in line with the trend of other land pooling projects at Nepal which is able to increase the land values from 300% to 600% (Karki, 2004). Additionally, demand of land inside the project is so high that it is very difficult to get the small plots of around 170 m² and a single piece of land is sold for more than 3 or 4 times. This shows there is speculation in the land market of Icchangu Narayan like in other land pooling projects of Nepal which Karki (2004) has pointed out as a weakness.

All these scenarios mentioned in above paragraph give the picture that Icchangu Narayan land pooling project goes against the affordability of low income people and it has excluded the poor from the land market. For the reason that there is no incentive to keep the land prices low, land pooling is criticised for not being accessible to poor (Yomralioglu and Nisanci, 2005). However this land pooling has taken care of the poor inside the project area. Small plot holders whose area do not meet the minimum standard of 80 m² after re-plotting gets the remaining area of land in a subsidised rate from project and they can even pay in instalment. Therefore there is cross subsidy within the project for these people. However these beneficiaries are not the poorest of the poor.

The large group of urban poor who are unable to enter the land market would have been completely excluded by the project if government would not have bought the land for it. Government purchasing land in high costs could be the solution for this project but not sustainable in long term vision when they are facing deficiencies in investment. Therefore Nepalese government should work on to make over their weakness and find a way out for the practical implementation of the inclusionary provision of low income plots in land pooling.

5.8 Recommendation

Based upon the data analysis of fieldwork, following recommendations are made which would help future policy makers of Nepal towards the goal of getting affordable plots through land pooling for low income people.

Need of mandatory and realistic inclusionary program

It was discovered from the analysis that the inclusion of low income plots in land pooling is not compulsory and enforceable. To overcome this and make it enforceable either the present

Town Development Directives (TDD) should be passed from cabinet or the inclusionary provision should be put into the Town Development Act or Kathmandu Valley Development Act. Moreover the language used in TDD should be made more promising so that it will not have dual meaning and many interpretations. There should be the clarity of terminologies like the clear and practical definition of low income group. In addition to this there should be the process and criteria to identify the beneficiaries so that the purpose of provision can be achieved. Furthermore these all will make the inclusionary provision less political and more practical.

Need of Government subsidy

It was found from the analysis that land owners of the land pooling project area are very powerful and dominant in comparison to government. This is because land pooling projects are fully financed through land owner's contribution and government does not put any share. Even the project staffs on contract are paid by land owners. Therefore to overcome this and maintain the dignity of government side, there should be some percentage of subsidies for administrative work in land pooling project as mentioned in National Shelter Policy 2011. Also government should provide permanent government staffs for executing land pooling projects. This would help to reduce the monopoly of land owners in land pooling and increase the willingness of government employees for negotiations and make strong enforcement.

Need to exclude involvement of private consultancy in crucial stage

Involvement of private consultancy in the crucial stages of project affects the privacy of the government project. There are the cases when private consultancy leaks the re-plotted master plan after development which results pressure to government officials from powerful land owners for good locations. This further affects the equity of the project. Therefore government should increase the capacity of their employees and discourage private consultancies involvement in the critical works like re-plotting of acquired land in order to maintain fairness in the project.

5.9 Scope for future researchers

Land development projects of Kathmandu have the potential to reduce the gap of housing deficiencies for low income group. This research has figured out the influencing factors towards incorporating the provision for low income group in land pooling which is the land development program being initiated and implemented by Government of Nepal. However land development from government is not sufficient in supplying serviced plots and there are many land development and housing projects being implemented by the private sectors that is the real estate developers. Therefore private land development projects should also have inclusionary provision for low income people which is asked by Town Development Directives and researches should be done to identify the problems and issues regarding the private developers in incorporating the inclusionary provision. In addition to this studies should also be done upon the land brokers who are developing land without license as they are the major suppliers of land in case of Nepal.

Independent researches on each factors influencing inclusionary provision in land pooling should be carried out to have in-depth analysis over it. This research has not done literature review and detail investigation upon the factor "effect of inclusionary provision on the quality of infrastructure" as it is discovered from the analysis of this case study. Therefore future research could also be carried out on this topic to have a thorough insight upon it.

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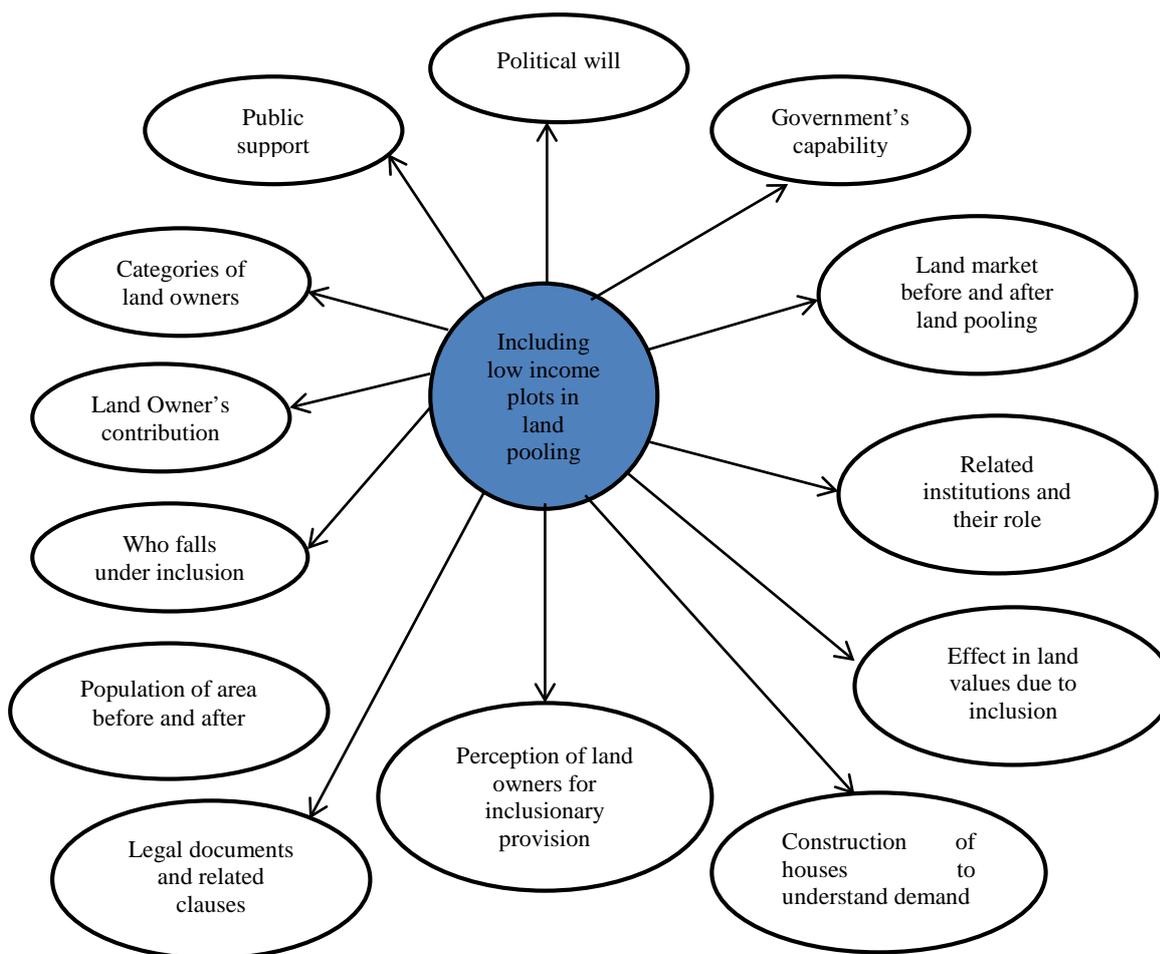
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Annex I: Case Study Protocol

Objective	To explain the factors that have influenced the abandonment of the inclusionary provision of low income plots in the Icchangu Narayan land pooling project at Kathmandu
Research strategy	Case study
Primary data collection method	In-depth interview and Observation of field area Study of minutes of meetings, tender documents and project report
Number of Respondents	Government official=8, Representatives in management sub-committee=4, Project staff=4 Users committee=5 Total: 13 respondents
Exclusion criteria	Based upon expertise and experience

The diagram below presents the important components which need to be addressed during the field work to answer the research questions. Moreover this is a checklist to ensure field work do not miss the important components which is intended to measure for this research.



Source: Author (2015)

Annex II: Interview guide for Government Officials

Interview guide for Government officials from Department of Urban Development and Building Construction (DUDBC) and Kathmandu Valley Development Authority (KVDA)	
MSc. in Urban management and Development at Institute for Housing and Urban Development Studies, Erasmus University, Rotterdam, The Netherlands.	
Researcher	Nisha K.C
Introduction of Researcher	Researcher is an architect at DUDBC in Kathmandu, Nepal. She is studying Master's program at IHS from September 28 2014 to September 25 2015.
Contact	nishniss@gmail.com
Research Topic	Including Low Income Plots in Land Development Projects: A case of Icchangu Narayan Land Pooling Project
Objective	To identify the factors that have influenced the abandonment of inclusionary low income plots at Icchangu Narayan land pooling project in Kathmandu
Date	

Note: The information provided by the interviewee is used for academic purposes only. For confidentiality reason name and designation of interviewee would not be mentioned anywhere.

Indicator	Question
Section I: Legal and Policy Framework	
Levels of regulation (constitution, Act, regulation, directives)	1. Which legal documents explain about land pooling and the inclusionary provision? Follow up question (FUP) a. Is land pooling in Constitution, Act, Regulation or Directives? FUP b. Is inclusionary provision in Constitution, Act, Regulation or Directives?
Institution in charge of land pooling	2. Which department/organization is legally responsible for land pooling in Kathmandu? FUP a. What is the role of implementing organization?
Percentage allocation of inclusionary plots	3. Can you explain how can inclusionary low income plots be enforced legally in land pooling projects? FUP a. What was in their mind while making this policy?
Obligation to landowners	4. Can you tell me whether the provision is compulsory or not for landowners and how can you monitor that?
Provisions of punishment/fines	
Complementary instruments like cost offsets, incentives, rezoning.	
Section II: Implementation of Icchangu Narayan Land Pooling Project	
Project setup (formation of committee)	5. Can you explain about the project size and its operation mechanism?
Project size (number of land owners, plots)	
Project operation (loan taken, valuation of land)	
Public hearings for negotiation	6. Can you tell me about the participation level in project?
Holdouts and supermajority rule	7. How do you manage to negotiate?
Court cases	FUP a. Who are the land owners of the area? Can you explain about their categories or background?

Indicator	Question
	FUP b. How do you feel about the land owners? Are they powerful?
Percentage contribution for infrastructure and amenities	8. How is the project financed?
Percentage contribution for reserve plots	
Cost recovery of project	
Equity in location	9. What is done to ensure the equity in distribution of plots?
Equity in size of plots	
Section III: Factors influencing implementation	
Willingness of Government	10. Can you tell me about government's initiation to implement the inclusionary provision in land pooling?
Availability of trained staff	11. How capable is government in enforcing the provision? FUP a. Do you believe that government can negotiate with land owners for their contribution for inclusion of low income plots? FUP b. Do you believe that government has manpower to assess and update the land values of the area?
Transparency	12. What do you think about the response of Government in providing information to landowners regarding any issue related to the project? FUP a. Does government make the information public? FUP b. Is government quick in responding to land owners? FUP c. Does government provides information easily? FUP d. Do land owners have to request for information?
Accountability	
Demand for serviced land before the project	13. Can you explain about the land market of Icchangu Narayan area? FUP a. Is the area a growing area? FUP b. Is there enough demand for serviced land?
Changes in land prices before and after land pooling	14. How did the land pooling project influence the land prices? FUP a. Have land priced increased or decreased with the land pooling? Can you give an example?
Perception towards the provision	15. What is the opinion of landowners about the inclusionary low income plots in Icchangu Narayan land pooling project?
Willingness to pay by landowners	
Change in landowner's contribution (they has to contribute for low income plots)	16. How will be the contribution by landowners affected if the provision is enforced properly? FUP a. Would the land owner's contribution increased if they had to pay for the provision? FUP b. Is it possible to pay for low income plots by the market rate buyers or the buyers of reserve plots?
No change in contribution (market rate buyers pay for low income plots)	
Demand for land (after the inclusion of low income plots)	17. Can you tell me how does the inclusion of low income plots affect the land values and the demand?
Change in land values (after the inclusion of low income plots)	
18. Rate the following factors from the scale of 1 to 6 as per its influence for the abandonment of inclusionary provision in Icchangu Narayan land pooling project? (Note: 1 is for most important and 6 is for least important)	
i. Legal and Policy Framework <input type="checkbox"/>	
ii. Political will and Government's capability <input type="checkbox"/>	

Indicator	Question
iii. Land market conditions	<input type="checkbox"/>
iv. Public support for inclusionary plots	<input type="checkbox"/>
v. Contribution ratio	<input type="checkbox"/>
vi. Land values after inclusionary	<input type="checkbox"/>
19. Additional comments from interviewee	

Note: Before reaching the final conclusions, the preliminary analysis would be discussed with the interviewee (if he/she permits) to get feedback on the interpretations of the data as member check.

Annex III: Interview guide for land owners

Interview guide for land owners	
MSc. in Urban management and Development at Institute for Housing and Urban Development Studies, Erasmus University, Rotterdam, The Netherlands.	
Researcher	Nisha K.C
Introduction of Researcher	Researcher is an architect at DUDBC in Kathmandu, Nepal. She is studying Master's program at IHS from September 28 2014 to September 25 2015.
Contact	nishniss@gmail.com
Research Topic	Including Low Income Plots in Land Development Projects: A case of Icchangu Narayan Land Pooling Project
Objective	To identify the factors that have influenced the abandonment of inclusionary low income plots at Icchangu Narayan land pooling project in Kathmandu
Date	

Note: The information provided by the interviewee is used for academic purposes only. For confidentiality reason name and designation of interviewee would not be mentioned anywhere.

Indicator	Question
Section I: Implementation of Icchangu Narayan land pooling project	
Project setup (formation of committee)	1. Can you explain about the Icchangu Narayan land pooling project size and its operation mechanism?
Project size (number of land owners, plots)	
Project operation (loan taken, valuation of land)	
Public hearings for negotiation	2. Can you tell me about the participation level in project?
Holdouts and supermajority rule	3. How does government manage to negotiate?
Court cases	FUP a. Can you explain about the categories or the background of land owners of the project? FUP b. Can land owners influence the government in decision making? Can you give an example?
Percentage contribution for infrastructure and amenities	4. How is the project financed?
Percentage contribution for reserve plots	
Cost recovery	
Equity in location	5. What is done to ensure the equity in distribution of plots?
Equity in size of plots	
Section II: Factors influencing implementation	
6. Do you know about the inclusionary provision for low income plots in land pooling project at Kathmandu?	
Willingness of Government	7. Can you tell me about government's initiation to implement the inclusionary provision in land pooling at Icchangu?
Availability of trained staff	8. How capable is government in enforcing the provision? Follow up (FUP) a. Do you believe that government can negotiate with land owners for their contribution for inclusion of low income plots? FUP b. Do you believe that government has manpower to assess and update the land values of the area?
Transparency	9. What do you think about the response of Government in

Indicator	Question
Accountability	<p>providing information to landowners regarding any issue related to the project?</p> <p>FUP a. Does government make the project information public?</p> <p>FUP b. Is government quick in responding to land owners?</p> <p>FUP c. Does government provides information easily?</p> <p>FUP d. Do land owners have to request for information?</p>
Demand for serviced land	<p>10. Can you explain about the land market of Icchangu Narayan area?</p> <p>FUP a. Is the area a growing area?</p> <p>FUP b. Is there enough demand for serviced land?</p>
Changes in land prices before and after land pooling	<p>11. How did the land pooling project influence the land prices?</p> <p>FUP a. Have land priced increased or decreased with the land pooling? Can you give an example?</p>
Perception towards the provision	<p>12. What is your opinion of about the inclusionary low income plots in Icchangu Narayan land pooling project?</p>
Willingness to pay by landowners	
Change in landowner's contribution (they has to contribute for low income plots)	<p>13. How will be the inclusionary provision affect the contribution by landowners?</p> <p>FUP a. Would the land owner's contribution increased if they had to pay for the provision?</p> <p>FUP b. Is it possible to pay for low income plots by the market rate buyers or the buyers of reserve plots?</p>
No change in contribution (market rate buyers pay for low income plots)	
Demand for land (after the inclusion of low income plots)	<p>14. Can you tell me how does the inclusion of low income plots affect the land values and the demand?</p>
Change in land values (after the inclusion of low income plots)	
<p>15. Rate the following factors from the scale of 1 to 6 as per its influence for the abandonment of inclusionary provision in Icchangu Narayan land pooling project? (<i>Note: 1 is for most important and 6 is for least important</i>)</p> <p>i. Legal and Policy Framework <input type="checkbox"/></p> <p>ii. Political will and Government's capability <input type="checkbox"/></p> <p>iii. Land market conditions <input type="checkbox"/></p> <p>iv. Public support for inclusionary plots <input type="checkbox"/></p> <p>v. Contribution ratio <input type="checkbox"/></p> <p>vi. Land values after inclusionary <input type="checkbox"/></p>	
<p>16. Additional comments from interviewee</p> <p>.....</p> <p>.....</p>	

Note: Before reaching the final conclusions, the preliminary analysis would be discussed with the interviewee (if he/she permits) to get feedback on the interpretations of the data as member check.

Annex IV: Contribution in land pooling

Description of land	Width of road before land pooling	Width of road after land pooling (Depth of serviced land 14m)						Width of road after land pooling (Depth of serviced land 18m)						Width of road after land pooling (Depth of serviced land 21m)						
		5	6	7	8	9	10	6	7	8	9	10	11	12	7	8	9	10	11	12
	Meter																			
Touched with black top road	6	-	-	3.5	6.7	9.7	12.5	-	2.7	5.3	7.7	10	12.2	14.3	2.3	4.5	6.6	8.7	10.6	12.5
Touched with gravel road	5	-	3.5	6.7	9.7	12.5	15.2	2.7	5.3	7.7	10	12.2	14.3	16.3	6.6	8.7	10.6	12.5	14.3	16
Touched with earthed road	4	3.5	6.7	9.7	12.5	15.2	17.6	5.3	7.7	10	12.2	14.3	16.3	18.2	7.5	6.6	8.7	10.6	12.5	14.3
Touched with non-vehicular road	1	12.5	15.2	17.6	20	22.2	24.3	12.2	14.3	16.3	18.2	20	21.7	23.4	12.5	14.3	16	17.6	19.2	20.7
Touched with irrigation canal	1	12.5	15.2	17.6	20	22.2	24.3	12.2	14.3	16.3	18.2	20	21.7	23.4	12.5	14.3	16	17.6	19.2	20.7
No road	-	15.1	17.6	20	22.2	24.3	26.3	14.3	16.3	18.2	20	21.7	23.4	25	14.3	16	17.6	19.2	20.7	22.2

Source: Sangacche and Gorkhali (2003)

Annex V: Adjusted land prices for Inflation

Year	Consumer Price Index 2010=100	Land prices in Nepalese Rupees (Rs) per Anna. (1 Anna =31.76 m2)	Land prices in Nepalese Rupees (Rs) per m2	Adjusted land prices per m2 based on 2014 price in Rs	Adjusted land prices per m2 based on 2014 price in US Dollars, 1US\$=95.98 Rs	Remarks
2000	53.94					
2001	55.39					
2002	57.07					
2003	60.33					
2004	62.04					
2005	66.29	200000	6297.22	13425.64644	139.8796254 which is nearly equals to 140	Minimum marked price by project at the initial phase of project.
		124859.9	3931.36	8382	87.5	
		74915.97	2358.82	5029	52.5	
		24971.99	786.27	1677	17.5	
		12485.99	393.14	838	8.8	
2006	70.87					
2007	74.95					
2008	82.35					
2009	91.47					
2010	100	960000	30226.700	42719.40	445	Government bought land in this price for first phase.
2011	109.27	800000	25188.92	32579.39	339.43 which is nearly equals to 340	Government bought land in this price for second phase.
2012	119.6					
2013	130.42					
2014	141.33	800000	25188.92	25188.92	262.4392582 which is nearly equals to 263	Minimum marked price of reserve plots by project
		1200000	37783.38	37783.38	394	Individual land owners are selling above this price.

Note 1: Base year is 2014

Note 2: Poverty line for 2001 is Rs 6100. When adjusted it is Rs 15564.42 and 162 US\$

Source: Modified in (index mundi, 2014)

Annex VI: Criteria for identification of percentage of government subsidy in land pooling project

Criteria for subsidy	Project size and volume	Percentage of subsidy from Government of Nepal	Percentage of subsidy from local government
Project size	Above 508737.04 m ²	8	2
	Between 152621.11m ² to 508737.04m ²	9	3
	Less than 152621.11m ²	10	5
Total estimate project cost (except the cost of land)	Above 986290.56 US\$	8	2
	Between 493145.28US\$ to 986290.56 US\$	9	3
	Less than 493145.28US\$	10	5
Implementing body	Metropolitan	5	5
	Sub-Metropolitan	7	4
	Municipalities with:		
	Yearly revenue collection up to 493145.28US\$	8	4
	Yearly revenue collection between 197258.112 and 295887.16 US\$	9	3
	Yearly revenue collection less than 197258.112 US\$	11	1
	Village development committees	15	0
	Others: Town Development committees/ Department of Urban Development and Building Construction etcetera	15	0
Priority of Nation	P1 Project	10	5
	P2 Project	8	5
	P3 Project/ project which does not comes under Nation's project	5	5

Source: Sangacche and Gorkhali (2003)

Annex VII: Members of management sub-committee

S.N	Organisation	Position in Organisation	Position in management sub-committee
1		Local Development Officer	Director
2	KVDA	Development Commissioner	Advisor
3	District Administration Office, Kathmandu	Chief district officer	Member
4	DUDBC	Director General	Member
5	DUDBC, Division office, Kathmandu	Division Chief	Member
6	District commissioner office, Kathmandu	Development Commissioner	Member
7	KVDA	Project manager	Member secretary
8	KVDA	Legal officer	Member
9	Survey Office	Chief	Member
10	District revenue office	Officer	Member
11	Ministry of Urban Development	Representative	Member
12	Landowner	Representative	Member

Source: KVDA (2015)