

Land Readjustment in Kathmandu

The Naya Bazar Project

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Introduction

“Food, Shelter and Clothes to Poor People”, 1974 national slogan of the country.

The increasing population density and its healthy accommodation is the major challenge of today’s urban world. In developing countries, there is general tendency to migrate towards settlement pocket. Due to lack of general services and facilities, already deteriorated settlements are constantly disturbed by migration especially of poor people (lower income people).

In the social term, unless people are provided with modern facilities and opportunities in their original home ground, they are likely to deviate towards cities. For countries like ours, overall planning and provision of fundamental needs for whole country is a very long process. The planning and management shall be done from the local effort for the betterment of the migration infected areas concurrently with the overall development of the country.

The first problem with migration is the provision of housing. The ever-demanding nature of drinking water, communication and energy will follow the route. This leads to a haphazard valley, each expansion is leading to destruction in terms of sanitary, road and fire provision. The lack of open spaces, educational institutions, hospitals, sewer system and other related services are increasing the tension. The government in such situation in developing countries are always helpless and problem never stops expanding.

The following salient points shall highlight the obstacles in overall urban planning and cause of disorientation in our housing sector:

1. lack of detail land use-framework
2. never mentioned policy of sub-division of land parcels.
3. lack of professionalism in construction sectors
4. always occurrence of financial crisis
5. lack of clear policies
6. lack of co-operation and authority.

Hence the most important aspect to check the uncontrolled and haphazard urbanisation is to realize comprehensive development plan and implement it.

The main objective of this paper is to attempt to describe existing land readjustment policy in Nepal and to recommend some suggestion with reference to the Naya bazar land readjustment project in Kathmandu.

Country Background

Nepal is Himalayan kingdom situated between China with the North and India with the south, east and west. It covers the area of 147,464 sq. km. The population is 22 million in 1996 with the growing rate of 2.08 % annually (1981–1991). The per capita income of the people is US\$ 210. The percentage below the absolute poverty

line is 42 (NPC 1998). Mountain and hilly region have a major part of the country's population and even more in terms of area. The altitude of the country range from north 8,848 m (Mt.Everest) to the south 200m(Plain terai).The climate of the country is from severe winter (-35 ° Celsius) on the north to extreme hot(45 ° celcius) on the south. Agriculture and tourism are the main source of economy of the country. Over 80% of the total population has agricultural occupation.

Urban Development in Nepal

Nepal is presently urbanizing fast. The total urban population in 1993 was 1,901,374. The average house hold income for the urban area is 1991 is US\$ 1,198 while on the city product per urban area the same year is US\$209. The total investment in housing in 1991 was 8.4 percent of GDP. Housing units produced per 1,000 population was 6.2 in 1991 according to NNHS survey(MHPP 1991)

Over the years housing needs have increased and urban development process has become complex. Several factors contribute to this change. The democratic practice brought people's initiation at the centre of the debate. But government has so far failed to provide urban services adequately. In urban areas land became scarce. Terai town did not urbanized to expected degree, Kathmandu became the focal city for migration and rapidly urbanizing.

So the housing development is being complicated and sustainable urban development has been essential in Kathmandu to handover the better city to next generation.

A high population growth rate and an unprecedented rural-urban migration due to extreme hardship in rural areas has characterized the urban explosion. In Nepal the main characteristic of urbanization are following:

- Rural to urban migration,
- Change of agricultural activities to non-agriculture activities.
- Change in occupational structure from agriculture to industry and services,
- Change from a sparse rural settlement pattern to a relatively dense urban settlement pattern,
- Increase interactions and functional linkage among centres of population concentrations,
- Change in behaviours, values and institutional structure,
- Change in physical environment and
- Increased modern amenities and services.

Urban population presently accounts for about 16 percent. In the 1952/54 census, the town was identified as an area with a population of 5,000 or over with an urban environment such as school, college, judicial and administrative offices, bazaar, communication and transport facilities, mills factories etc. The Municipality Act of 1998 has categorized municipalities into three categories:

Mahanagarpalika (Metropolies) Upamahanagarpalik (Submetropolies) and Nagarpalika (Municipality) based on the population size and income. The minimum population for identification of municipality is 20,000.

Table 1 : Urban Trend in Nepal

Year	Total population in 1000	Urban population in 1000	% Urban population
1911	5,939	-	-
1952/54	8,256	0,239	2.8
1961	9,413	0,339	3.6
1971	11,558	0,462	4.0
1981	15,142	0,947	6.3
1991	18,600	1,745	9.6
2001	23,832	3,716	15.9
2011	29,543	6,884	23.3

The pace of urbanization increased sharply from the seventies onward.

Internal migration account for more than 30 percent of the urban population. The push factors as well as the pull factors have placed significant role in attracting migration to urban centres.

The trend of urbanization in Nepal is presented Table-1.

By 2011, the existing 58 municipalities including metropolises and sub-metropolises will be expected to be contained over 20 percent of the national population and 16 towns will exceed 100,000 population.

In 1991 Kathmandu Municipality has the 24 percent of total urban population of the country.

Table 2: Kathmandu Metropolitan City Population

Population			Growth rate			Population	
1971	1981	1991	1981-91	1991-01	2001-11	2001	2011
150,402	235,160	421,258	6.00	5.60	5.5	726,419	1,240,829

Existing Condition of Urban Services in the Kathmandu Valley

In Nepal the services and infrastructure conditions are more critical than shelter itself. According to the housing survey of 1992, the number of homeless population was estimated to be only 19,000. The access tends to decrease due to increasing pressure on land, increasing economic disparity, implementation of higher standards etc. People will continue providing shelter themselves as adequate as they could perceive and they themselves define what is adequate if access condition could be met. Shelter delivery system in Nepal is based on the increasing of access of people to housing elements. The identified housing elements are building, materials, technology, finance, land and information. Of these, land is identified as the most critical element and various land readjustment projects have helped to increase the land supply. Community's efforts have been supported by the national and local governments in improving infrastructure and service conditions. However much efforts and commitments are required to ensure adequate housing for all, given the

projected short fall every year.

The urban environment in Kathmandu is fast deteriorating. All the urban areas have serious deficiencies in essential infrastructures. The physical life is far from being satisfactory.

Periodic occurrence of disease like hepatitis and dysentery and the increasing incidence of malaria and encephalitis in Kathmandu has been attributed to poor drainage, stagnant water bodies without cleaning and maintenance, lack of waste disposal facilities, lack of safe and adequate drinking water, air pollution etc.

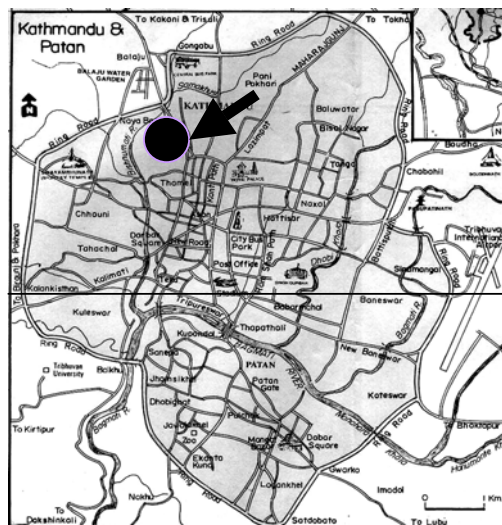


Fig 1: Location of the Naya Bazar Project site

The problem of the air and water pollution has taken its climax height. Most of the water bodies are polluted and drainage and sanitation are bad. Rapid population growth has created critical condition. Valley is highly productive agricultural area. But by 2020, urban growth could take over all good arable land and cover 60 percent of the valley area (HMG/USAID 1990, p.161) Fringe area are developing at very low density while density of the core area is around 1200 person per hectare.

Main Problems and Issues of Urban Development in Kathmandu

In Kathmandu valley, inadequate provision of infrastructure and services has given rise to slum areas, haphazard growth, weak inter-linkage between urban and rural areas. All these situations led to rapid degradation of urban environment causing serious health problems and the quality of urban life has deteriorated. This deteriorating environmental condition has posed a serious challenge to tourism development ultimately to the economy of the country. Income distribution pattern has become more skewed during the last decade. Income distribution pattern have shown that disparity in income has considerably widened. There is economic stagnation. The disparities have increased in urban areas all the more.

The major problems can be enumerated as given below:

- Inadequate resource mobilization at the local level,
- Inadequate man power concerned with urban development affairs,
- Lack of adequate inter-sectoral integration in planning and implementation,
- Lack of participation from public and private sector,
- Inadequate land development mechanism as reflected by low density development, inaccessible vacant land, sprawl and haphazard growth increasing the cost of infrastructure and services in the future,
- Under utilization of infrastructure already in place making cost recovery difficult,
- Lack of consistent policy framework and
- Poor maintenance of utility service,

Another major issues are:

- Development of the fringe area with uniform and basic infrastructures.
- Preservation of physical and cultural environment,
- Development, effective implementation and regulation of land use plan,
- Expansion and upgrading of urban utility services,
- Co-ordination of urban development with rapid urbanisation.

So due to increasing urban population, the need for infrastructure and services increased rapidly. The future population of the city is of crucial importance in the provision of infrastructure and service needs over time depend upon major national policies industrial location, environment conservation, land use, decentralization etc. But the urban development policy has not yet been integrated with such policies. To come over the urban problems some effective measures have been started to lunch so far as solution for Land development. LR project is one among them.

To fulfil urban issues to some extent there are some land readjustment projects going in the Kathmandu Valley under the initiation of the Town Development Committee. One of the major issue prevailing in the Kathmandu regarding the LR is the Naya Dazar Land Readjustment (Land Pooling) Project. The project was started in 1996 but still running though the project was supposed to complete by three years. I've been involving in this project for five years from the beginning though a private firm and then latter on representing from the Municipality. Since this Project some how concerned to me professionally and officially, my aim on this paper is to attempt to present the description of key issues related to this project.

Policies and Strategies

The goal of urban development is to create better living and working environment for all including the urban poor through the provision of infrastructure services, housing and jobs.

Government Basic Policies for Urban Development

Basic Housing Plan 1986: "Housing as a basic need" formulated the basic housing plan. The goal of the housing policy is to enable the target group to build their shelter. The main issue is not the total housing stock as such but housing for whom. This is relevant because of high elasticity of demand for housing. If the poor is not guaranteed entitlement to housing, they will be homeless irrespective to how large the total housing stock is. In order to enable the low income families to provide themselves with housing the suggested programs includes land development programs with estimated total quality of land needed in urban areas; estimated; building material development and construction management programs; toilets and sanitation programs; technology development and information dissemination programs and housing finance and urban management program.

With the formulation of basic housing plan the investment in housing sector increased markedly. A separate ministry for housing and physical planning was created and many institution cropped up.

Shelter policy, 1997: The basic policy is based on the HABITAT 1991/92. The objectives are to facilitate the housing production, ensure self-reliance, clarify the

role of the various actors, facilitate the working of housing and land markets and reduce the adverse impact on environment. The stated policies are as follows:

A. Housing production and Maintenance

- Increase the production of dwelling units and increase the supply of service plots
- Provide the basic infrastructure and service plots
- Make improvement in the use of building materials and construction technology.

B. Effective mobilisation and allocation of financial resources

- Mobilize land and housing credit delivery mechanism in the formal and community sectors in an experimental basis.
- Ensure cost recovery of public investments in land, physical infrastructure and other services.
- Increase financial self-sufficiency in the shelter sector.

C. Institution

- Clarify the role of public and private sector for implementing the shelter policy
- Make necessary institutional arrangement for planning, policy-making, implementation, training, research and evaluation in sector related to the production of dwelling units.
- Introduce appropriate and effective laws and regulation and amend the existing one as needed.
- Create database to ensure simpler and more effective decision-making and monitoring process of shelter development.

The implementation strategy is based on the premise that existing shelter construction and production process relying on owner-builder system will be improved and strengthened as needed.

The Ninth Plan (1995–2000): The policies and strategies listed in ninth plan include:

- Improvement in the quantity and quality of the housing stock through the development land, physical infrastructure and services will be facilitated
- Economic sources to increase the access of finance for housing sector development will be effectively mobilized.
- An appropriate institutional base with clear institutional role-casting among public sector, private sector and NGOs in housing supply will be established. Organizational improvements and HRD programs will be emphasized in the field of housing, building and urban development.
- Internal resources will be mobilized by local materials, technology and skill in construction.
- The housing standard of the poor will be improved through the development of low-cost building technology in the rural areas.
- Emphasis will be based on the strengthening linkage between urban centres and rural while minimising the unbalances of the urbanization processes. Depending upon the feasibility, appropriate areas will be developed as associated satellite towns of the big cities, cluster settlement will be developed in remote mountain areas.
- Zoning plan with land use, market, housing, public spaces for the integrated and co-ordinated development as well as planned urbanization will be prepared. District head quarters of depressed and remote districts with potentials will be gradually developed as municipalities.
- Physical development with the little repercussion on ecology and environment will be emphasized with a view to minimize the increasing pressure in the Kathmandu valley.
- Emphasis will be given to promote rural development through the development of market towns by providing training to rural and semi-skilled poor.
- Urban environment will be improved through planned infrastructure development in municipality and market towns.
- Necessary norms will be prepared and followed leading to local participation to ensure co-ordination in implementation.

The main problem for urban development in Nepal is the resources availability. Resource available are not sufficient to face the problem of development and It is essential to ensure the affordability and replicability of various urban development programmes.

Land Development Tools and Land Readjustment (Land Pooling) in Kathmandu Valley

Recently in Nepal the Ministry of Housing and Physical Planning has formulated a housing policy to develop the city fringe area by planning and sub-division of poor urban land. Land development projects are being run under committees like Town development committees(TDC) chaired by local authority chief i.e. The Mayor of the municipality. Kathmandu valley urban development projects(KVUDP) are going under implementation.

The most relevant strategic tools for UD projects using in Nepals at present are :

1. Site and Services,
2. Guided Land Development (GLD), and
3. Land Readjustment(LR)

Among them the LR tool is being popular day by day. Some of the projects implemented successfully in Kathmandu using LR tool are given on the table-3.

Table 3: LR projects in Kathmandu Valley

Project	Location	Duration	Area (Ha)	Management: Headed by
Gongabu	Kathmandu Wa.No.29	1988–96	14.4	Mayor
Saibu	Lalitpur	1991–97	22.5	DDC chairman
Lubbu	Lalitpur	1993–96	13.5	DDC chairman
Libali	Bhaktapur	1993–98	34.0	Mayor
Dallu	Kathmandu Wa.No.15	1991–96	10.8	Mayor
Kamal Binayak	Bhaktapur	1991–96	7.3	Mayor

The approachment of the tool is basically depend on active public participation with less financial burdens. The main concept or the objective of this tool is to provide the basic infrastructures in the unplanned or poorly planned urban areas on the basis of land owner's contribution. After LR the original landowner gets their land back as in the form of the developed plots (Reshaped and Road access to each plots) with all basic infrastructures having good physical surrounding (planned area).

Advantages of the Land Readjustment

This tool is found most effective in Kathmandu to increase the capacity to provide infrastructure and services in planned ways though it was not so long introduced in Nepal so far as it has special advantages of cost minimization of the infrastructure and service provision and eventually to help to improve the urban environment.

Land readjustment technique made it possible to service even the difficult and dispersed areas in urban fringe. The technique urge the land owner to act more responsibly to general interest and Land speculation could be minimized so far. The process could be easily controlled by the community and municipality. Land needs to be acquired with the result that the cost of land development is reduced and development process made more equitable. This is sufficient to own the land for the purpose of planning and development. While increasing the supply of urban land for the development in systematic way LR can help:

- To improve the urban environment by: a) discouraging the sprawl growth, b) conserving environmental resources, c) minimizing the resource use in the provisions of infrastructure and services and d) controlling and designing the living environment within the project area
- **To increase access of the people including the poor to land (individual plot) for housing ensuring social justice and equity**
- To recapture the unearned income by different level of government and use the income for social and economic project.
- To better cope with urbanization

- The city grow in a planned way mitigating the problem of crisis management.

In financial term, these projects are highly feasible, with the provision of adquete open space, good circulation and community facilities and with different sized plots to cater to different income group. These project are rather promising. There is high level of participation of the beneficiaries even in decision-making. LR has several advantages-planning rules, road access, cost recovery and partnership building. The main advantage of this technicque is that the designated area become well laid out,easily serviced and ready for urban use.

The process is popular with original land owners since their new holding land although smaller are of increased value,both use value and commodity value.

Other Advantages of LR may be briefly listed as follows:

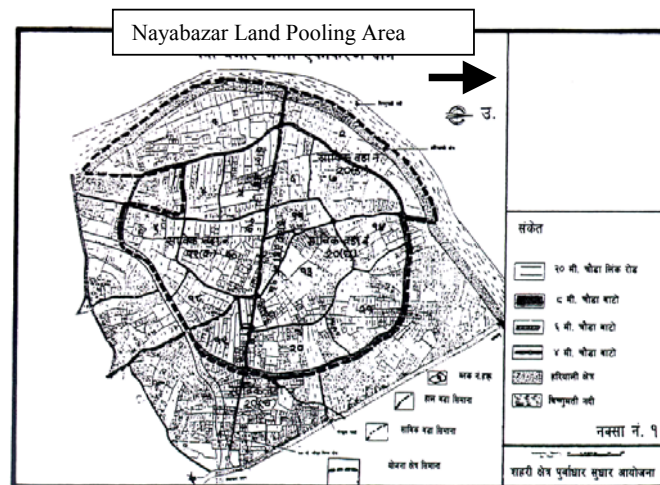
- the cost of infrastructure is borne by selling some of the plots and without external funds, planned development is possible
- **Low income group could be given some plots**
- Popular with land owners
- Enforcement of land use and building bye-laws is easier

Although LR still lack with implication of some practical concept the tool is being more popular day by day. The above mentioned strength are widely applicable to the most of the LR projects in Kathamndu. Only the priorities are changed from project to project

Nayabazar Land Readjustment Project (NLRP)

General Background: The project is approved by HMG of Nepal in April 1995. According to Town development Act BS 2045 and Land Acquisition Act BS 2034, the HMG has given decision to aqusite the land on the Kathmandu Naya bazar area on 1995 September. The project term of NLRP was three years at the beginning in the proposal but due to some technical and political constrain and passive participation from the land owners, the project period was compelled to extend the project period up to 5 years. The project is the joint collaboration of HMG, Nepal and Asian Development Bank. Kathmandu Metropolitan City is conducting the project through the Kathmandu Municipality Infrastructure Improvement Project. The project area is about 42 Hectors. The proposed investment of the project is NRs 7 cros (US\$1million)

Background of the selected Area: The Project area is called Nayabazar Land readjustment Project. This land pooling area is one of the project area proposed by Kathmandu valley town development committee as per Guided Land Development (GLD) Programme in 1989. The project area (Fig-2)is located within the two.different wards of the Municipality: Ward No 16. covers 25 hectors (487



Roppanies) and under Ward No 17 it comes about 17 hectors (332 Roppanies). The western boundaries of the both wards is the Bishnumati river, the second famous river culturally and religiously in the city area(capital).

Fig 2: The NLRP Project site Before land readjustment

There were no infrastructure developed in the project site. The area was totally raw land having only one existing road of three metres width going from east to west through the center and a circular road of average width of 3.5 metres with the radius about 100 to 150 metres. The land price in the project area is varied from 60-90 US\$

per sq.metre depending upon the road accessibility and from 150-200US\$ sq.metre in the center of the city. The most expensive land price of the city side is 1000-1200 US\$ per sq.metre.

The land occupied by the built up area in the project area was only 5 % of the total area. But the immigration of the people from inside and outside city is increasing day by day as the land is situated very near by the city center (1.5 Km from the city center square). The ratio of immigrants to project area from inner to outer city is 1 each to 4. So the built up structure is increasing rapidly. Most of the plots are irregularly shaped and differ drastically in the size with each other. About 90 percent of the total existing plots had not moterable access. The average plots size is about 130 to 150 sq.metre in area. Where the structure of the building is already exists. It has been very difficult to adjust the plots and hardly it could be changed the shape of such plot. Because of the flexibility in the property act, high subdivision of the plots can be found in the roadside or accessible areas leading the uncontrollable activities in maintaining the size of the plots as per existing building bylaws standard. Unusual size even below the 70 sq.metre could be found lots in that area.

Main Objective of the Project: The main objective of the NLRP is to open the proposed GLD roads that comes within the project area and applying the land pooling tool to readjust the existing land in planned and well managed way providing the basic infrastructure for housing and habitation. But this ultimately to provide direct benefits to each land owner of the project area.

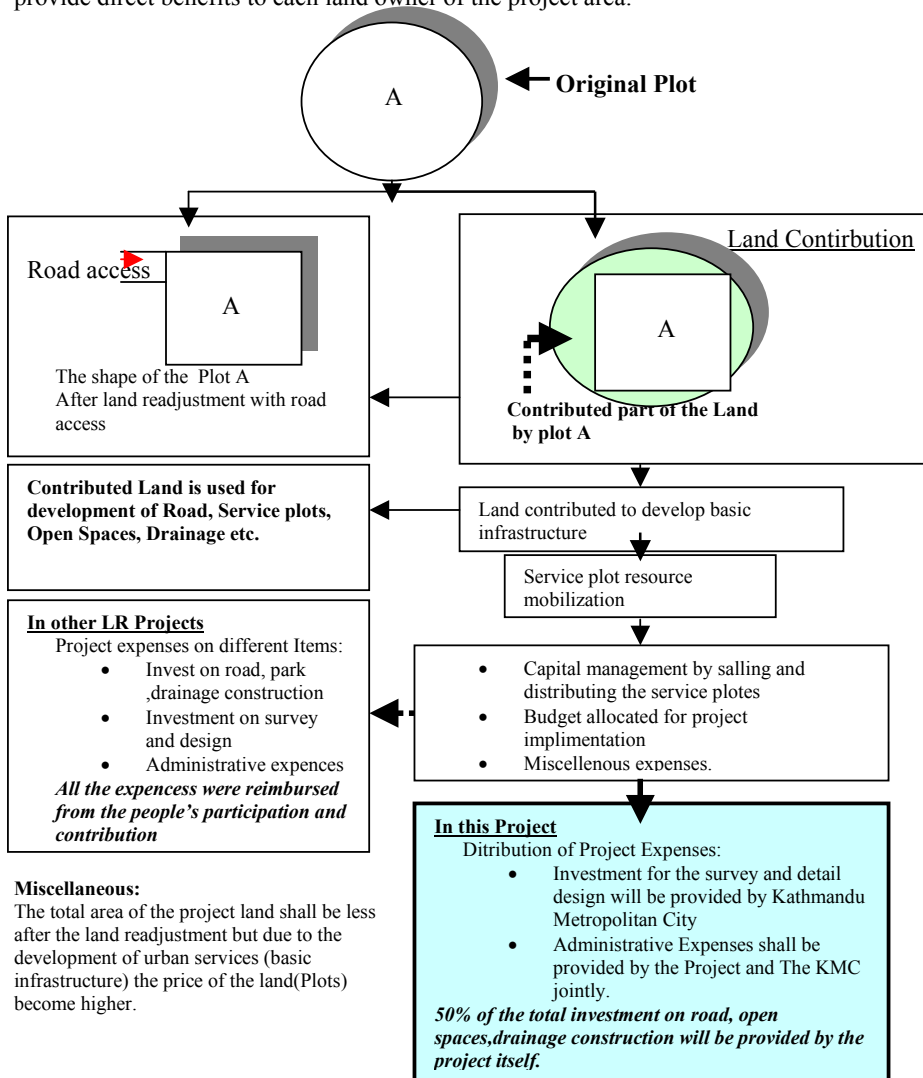


Fig 3: Flowchart showing the special feature of NLRP.

The part of the objective of this project is to accelerate to enhance the site ability to absorb the part of urban population in order to offset prevailing trend of urban sprawl through the valley.

The Principle of the Land Readjustment

In fact the main principle of land readjustment is first to provide regular shape and road access to each individual plot (hidden or unaccessible plots) and then after other facilities with the help of contribution of land from each landowner of the project area collectively and proportionately. The target is basically to help to low-income people who couldn't afford themselves to get road access to their plots individually and other local physical environment close around.

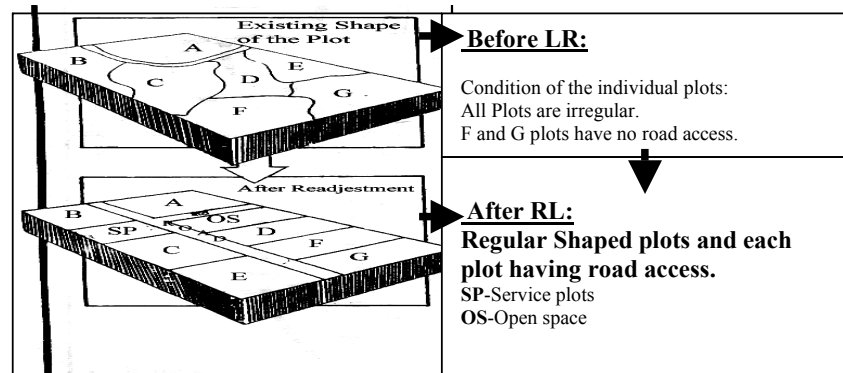


Fig 4: showing the plots Before and After the Land Readjustment process.

Land Pooling Implementation Strategy

The Municipality Infrastructure Improvement Project (MIIP) has been given all authority to take the responsibility to undertake the implementation of the project till its completion. So MIIP formulate the following strategy to commence and to complete the project as per schedule.

1. To publish the public notice for pre-qualification of the consultants (External and Internal) and Contractors
2. Selection of the pre-qualified Consultants and Contractors
3. To start the survey and prepare detail cadastral map of the project area with clear-cut boundary.
4. External Consultant will supply all the necessary data and guideline to the internal consultants for block detailing and co-ordinate them with MIIP and land management committees.
5. The project area is divided into five blocks and each block will be handed over to one internal consultant for detail design for readjustment and development of the plots with adequate infrastructure
6. Internal consultant will form a user's committee on each block and that user committee will be responsible for assuring the internal consultant for land development
7. The preliminary design will be prepared and submitted within the anticipated time along with Guided line provide by External consultant
8. Final modification will be taken in co-ordination with Ward Land management committee (WLMC) and user's committee of each block and decision will be given for final detail design for working drawings.
9. Final design will be approved to commence the construction for sewer line, stormwater drainage, road and demarcation of the plots. User's committee's suggestions will be given emphasis as first priority for finalizing all the design before commencement of the construction work
10. Commencement and completion of the construction of the infrastructures
11. Redistribution of the temporary landownership certificate of the developed plots to the original landowners.
12. To Pass the new bylaws for the Project (planned) area.
13. Transformation of the permanent landownership certificate to the land owners through the ministry of the land reform

The minimum size of the plot will be 79.6 sq.metre. The land owner with existing plot size less than above area will contribute the land in terms of money for the development of that plot according to the relevant market value as decided by user's committee of that block.

The co-ordination committee from user's side will be formed by the representatives one from each user's committee of each block.

The main reason of the Land contribution: In the project area according to the GLD program existing road had been widened but the widening of the road did not benefit those plots which are located in the inner side from the row having no road access. So the main purpose this project i.e. after LR is to give every plot the road access and infrastructure facilities. The main recovery of the project cost is fulfilled by selling of service plots created during the LR process. The utility of the service plots is for health service, commercial service, education service etc. The 50% of the project cost will be recovered by the selling of service plots contributed from the land owners and remaining 50% will be supplemented from the project budget as per government commitment.

Table 4: Land use, Naya bazaar LR project.

S.No.	Land Use	Area m ²	%	Remarks
1	Developed plots	314046	76.4	
2	Open Space	16452	4.0	
3	Service Plots(Social service for facilities and construction cost)	16452	4.0	
4	Road Area:			
	i.GLD	31455	7.6	
	ii.Inner road	32905	8.0	
	iii.BLR(Bishnumati Link Road)			Not included here
Total area		411310	100.0	

Proposed land use (818.44 Roppanies = 41. 97 Hectors)

In the Town Development Act (TDA) BS 2045 also it is stated that - any land in the town having no adequate infrastructure will be readjusted through land pooling scheme and provided basic infrastructure. The service plots created by contribution of land owners will be sold to recover the project cost and developed plots will be returned to original land owners proportionately.

Actually the main reason of pooling the land is to redistribute the temporary ownership of the developed land with road, drainage open space etc. for updating the topography and cadastral map and for legalisation of tax.

Actors and their Roles

The actors involving directly or indirectly in the Nayabazar Land Readjustment Project are:

International Organization: Asian Development Bank (ADB)

National level: Ministry of housing and Physical Planning (MHPP), Department of housing and Urban Development (DHPP), Town Development Committee (TDC).

District level: Kathmandu valley Urban Development Project (KVUDP), Town Development Project Execution Committee (TDPEC).

Local level: Project Execution Committee (PEC), Kathmandu Metropolitan City (KMC), Kathmandu Municipality Infrastructure Improvement Project (MIIP) Urban Development Department (KMC/UDD).

Ward level: Ward Land Management Committee(WLMC):Ward No 16, Ward No17.

Private firms: Consultants (External and Internal)/Contractor.

Local People: User's Committee (UC):Land owners and local people.

Role of Different Actors in NLRP

Project Execution Committee (PEC): There is a 16 members including two advisers Project Execution Committee. The main responsibility of PEC is to monitor

and support the MIIP for the implementation of Project. It plays the major role in bridging the implementation body and the related agencies at the policy level. All the decision taken by this committee have to be oriented towards the good of the people and the development area. The committee is headed by the Mayor of the Kathmandu Metropolitan City.

Implementation Body: MIIP is the main responsible body for the implementation of the NayaBajar Land Readjustment Project as KMC has committed to provide 25 percent of the total project cost. The main responsibility of the MIIP is to formulate and the peruse the implementation strategies in close co-ordination with the support of the wards committees. The chairman of the MIIP is the Mayor of the KMC.

Ward Land Management Committee (WLMC): Ward No:16 WLMC comprises 11 members and Ward No:17 WLMC comprises 9 members each chaired by the Ward Chairman. The General Secretary of both committees is the senior town planner of the MIIP(The Implementation body).

The major roles of the WLMC can be specified as :

- To support and advise the MIIP in preparation of re-plotting schemes and their implementation.
- To transfer information about the land readjustment procedure in general and implementation steps to be taken from the implementation body to the land owners.
- To maintain close relation with the MIIP and support committee as well as with political representatives of the municipality.
- *To organize and guide the singing Campaign for the final approval to re-plotted the re-plotting Scheme.*

The User's Committee (UC): The UCs are responsible to represent the interest of all land owner and the tenants of the project area to take the part in the field level decision. There are two categories of User's committee in this project. They are External user's committee(EUC) and Internal user's committee(IUC). IUC is to assist to EUC thereby assisting MIIP and WLMC. IUC is also responsible for participation in development of internal infrastructures for the blocks to conduct block discussion of the readjustment plan and to deal with the community in any conflict that may arise and for the solution to this. Likewise EUC is responsible for external infrastructures, readjustment of land parcels and formation of the common principle for community participation in the financing of the project cost as well as in the implementation.

The **main actor** of the LR project are WLMC i.e. in fact the land owner's committee. The level and quality of the infrastructure is depend upon the land owner's will because the project is preparing on their land. The land owner decide how much land will be contributed for the development cost of the project (infrastructure, open spaces, development and land management cost). The ward chairman will be the head of the CommitteeWLMC. So he represents the landowners. The committee functions as an advisory at the low planning level i.e. ward level.

The **sub actors** in PEC are: TDC, KVUDP, MHPP, concerned Agencies and related firms and offices (Water supply corporation, Road department, Electricity Authority, Sewer Board etc).

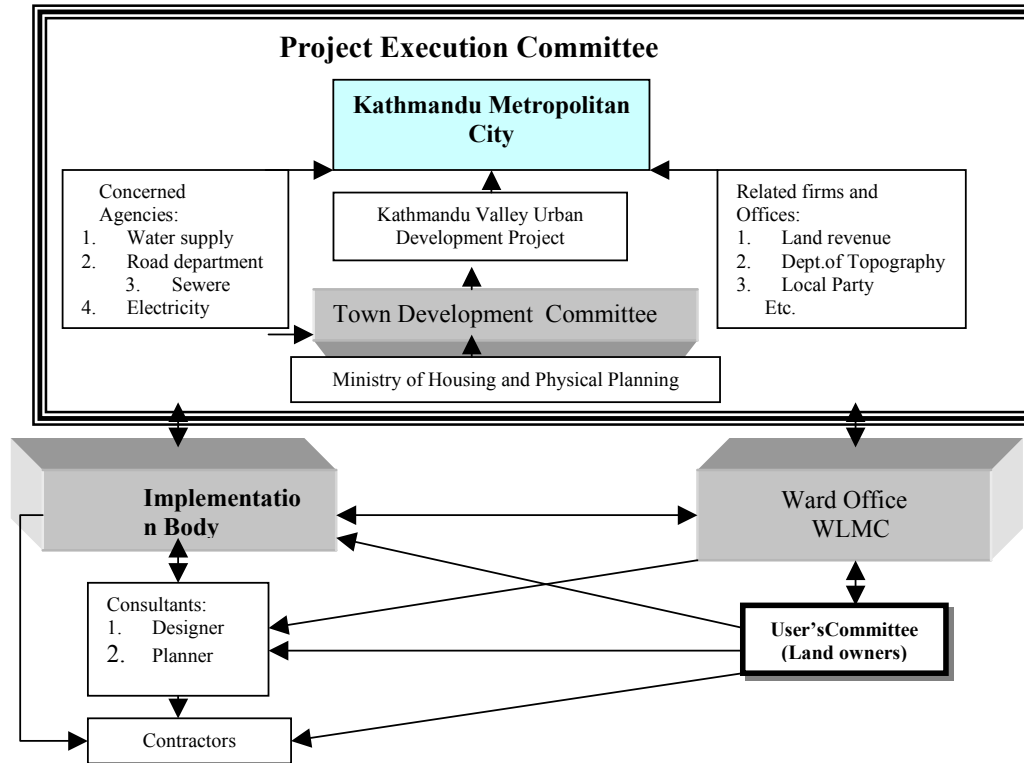


Fig 4: Related Actors of the Naya Bazar Land Pooling Project

Design

The basic design data of the Project area comprises:

Existing built up houses: 393 houses

Total No. of land parcels: 1051 nos.

House use: Fully by H/O 58%, Partly with tenant 31%, Fully by tenant 11%

Previous settlement of the House owners(%):

Within the project	7.38
Within the same ward	17.30
Within the KMC	64.38
Within the valley	5.34
Within the Nepal	5.6

Purpose of the house use(%):

Residential	85.24
Commercial	1.78
Industrial	1.02
Residential com. Commercial	11.96

More than 95 percent land type is private ownership and they are almost farmer family.

House hold survey report:

- Total population: 6,680 (At present)
- Literacy rate: 51%
- Avg. Household size: 5.6 persons
- Avg. Hh expenditure. NRs.: 7667 / month
- Avg. saving per house: NRs. 1133 / month
- Existing pop. density: 220ppha
- Ave. rate of land at present : US\$ 50-60 / m²

The design for the implementation of NLRP project includes: 1) the interaction with community and user's committees, 2) Presentation of analytical studies and field investigations, 3) Proposals of readjustment plots, 4) Approval of design from WLMC, 5) Plotting of roads, 6) Plot readjustment in the field, 7) Implementation work on the field (construction work, Transfer of public facilities), 8) New cadastral map preparation, 9) Selling of services plots, 10)

Distribution of temporary land ownership, 11) Cadastral map submission to Revenue office, 12) Distribution of permanent ownership.

All above design performance can be briefed in as follows:

Approval of the Design proposal: After signing of contract agreement on December, 1996 field work had been proceeded.



The work started with closed and detailed study of existing physical condition of the site. Side by side case studies of the completed and on going land pooling projects elsewhere were done. (Gongabu, Sainbu and Dallo LR projects). Different policies formulated and the experiences gained from the various case studies were taken in to account while aligning the infrastructures. As LR is multidisciplinary type of work input of professionals from various sectors (viz. planning, road engineering, water supply, sanitation, electrical engineering etc) were included in the team. There has been a substantial interaction with community of all blocks and also by various technical teams.

Fig 5 : The NLRP project site after Land readjustment

During the interactions subsequent information about land pooling, its policies and methodologies were disseminated to the interested people. With this method I personally felt the relation of community with MIIP and the consultant took a new dimension. With more and more people getting convinced to the LR scheme on one hand, while on the other and more and more individuals cases have been come to the notice of MIIP and consultants, which were quit helpful in terms of the devising policies of program. The discussion and meetings made many personal or community feelings clear to the consultants.

For the conformity to the analytical study and field investigation, household survey was taken in the standard format prepared by the MIIP for each specific case of infrastructure. It had helped to list out the priority of infrastructures in that community (that became the feed back from the community for analysis of existing conditions of services viz. road, sewer, drinking water, storm water drainage, electricity etc).

The design was approved by 1996, October. the conceptual re-plotted map as shown in the Fig. 5 was approved by WLMC/UC finally it was accepted by MIIP and PEC. This implies that the fixation of the contribution ratio of land is supposed to be finished. Then approved proposal is submitted to town development committee (TDC) for the final approval. Simultaneously the consent of each land owner for the land pooling is proceeded and collection of signature agreed to land contribution ratio is proceeded officially from each individual land owner.

Table 5: Proposed land use type on the NLRP.

Land use	Existing land condition (%)	Proposed Project (%)
Plots	97.0	70.5
Road	1.6	21.5
Open space	1.4	4.0
Service Plots	-	4.0

Field work mobilization: As per approved detailed plan of re-plotted map ,field work is mobilised to commence the work like demarcation of roads, pegging of plots etc. The project fund is sanctioned for this. Then re-checking and re-correction are done parallely prior to transfer of re-plotted land. If any dispute and confusion arises with the land owners it is solved on the site with mutual discussion and solution peacefully in the presence of all concerned parties. At the same time preparation of documents for the infrastructure construction are proceeded like cost estimation, tendering and contract document etc.

Construction Work: After completion of final re-plotting by pegging out, the contractor starts construction work as per drawing and specification in the agreement. The road alignment and plot boundaries are given special attention to

minimize the error in plot areas while lay out is proceeded. After the final construction of the roads, drainage, open spaces it is handed over to concerned authority officially or to UC for proper maintenance and operation of the system.

Service plot selling: In this project four percent of contributed land is allocated as the service plots. The rate of these service (reserve) plots are approved by the WLMC. Then this will be the final rate and plots are sold to the people through the public auction accordingly. Then loan of the project is repaid along with surplus revenue provided from KMC an concerned authority.

Table 6: Cost-benefit Analysis

Item	Total Land (Sq m)	Original land (Sq m)	Land value	Land after LR (Sq.m.)	Land value after LR (29.5%-Land Contribution)	Land value increment ratio
Plots		398970.70	23938242.0	289973.55	43496032.5	1.82
Road		6580.96		88431.65	-	
Open spaces		5758.34		16452.40		
Service Plots		-		16452.40		
	411310	411310		411310		

According to C/B analysis the value of the readjusted (reshaped) plot is supposed to be increased by 1.82 times higher than the previous original plot.

Distribution of permanent landownership certificate: Then after final land ownership certificate is prepared by land revenue office running under the Ministry of land reform. The final land ownership is handed over to the land owner.

The concerned department of the municipality takes care of the newly provided infrastructure to maintain the regulation of operation and maintenance.

Conclusions and Recommendation

LR is very practical and flexible technique which could be modified easily according to the nature and the scale of the LR project size and site. It is highly applicable scheme in the developing country like Nepal, where the government and public land are very negligible or comparatively minimum quantity and the individual land are common, where the government has no control over the informal spontaneous settlement, where the government is very poor and the people have land but poor urban services and people could not manage these service themselves alone and where the majority of the people are living under the poverty level.

Suggestions on LR: To improve and for effective implementation of the existing LR programs the government and related responsible agencies should pursue with the following:

- The LR projects should be targeted to the low-income groups.
- The bye-laws against the further subdivisions of the re-plotted land should prospectively developed and it should be strictly maintained while further development takes place, A part of service plots should be categorically kept for selling to specific low-income group.
- Municipality may take initiative role to develop the low-cost housing in the area of service plots before its transformation to the government. Municipality could sale or distribute theses houses in subsidised rate to the low-income people of the city with special provision.
- The project is silent about the maximum size of the plots. There is a risk of further sub-division of bigger plots having size more than 120 sq.metre. Landowner may sale it in higher price after LR for his personal benefit as he wish. This may affect the whole project area negatively as the objective of the LR is confined. So to discourage the further subdivision of the developed plots the process of sub-division should be made in such a way that no more subdivision or re-plotting could takes place and no more sub-division could be proceeded. That means the bye-laws for the project area should be made with standardisation of the minimum plot size and provision of infrastructure near the bigger plots and special restrictions in subdivision as per bye-laws.

- To make affordable the land contribution the land owner's due should be made minimum for service plot by making or inspiring the contribution in terms of labour for the construction of the infrastructure such as road widening, trench digging and other manpower services (labour based construction). It means by developing the self-help contribution in the development of the infrastructure the affordability of the land owner could be improved or could be made much higher, ultimately this means urban poor get more benefits with less contribution (land or cash). It may help land owner to increase affiliation to his land too.
- There are so many other urban poor areas like Nayabazar which have to be developed. But as until the government interest does not reach there in time those areas has to wait hoping on queue. So to accelerate implementation of such project government should strengthen the local municipalities with full authority, so that if majority of the locality will to implement the land pooling project through private consultants the municipality could implement LR projects jointly with landowners.
- As the risk of further subdivision of bigger readjusted plots is always existed and there is always probability of its negative impact on the objective of the project. So the maximum size of the plots should also be fixed accordingly and provision for the discouragement of the further subdivision of the land or plot in the developed area should be developed during the implementation stage.
- As the project area has equity in gender issues and women are the main households (Women and children stay most of the time at home) women's and children's need consideration should have the first priority in the project. In this project women's participation was negligible.
- LR scheme is very difficult to implement in such area where some plots have already moterable accesses. Usually the people who have had already such facilities like vehicular access etc. they are always found to be major obstacle for lunching the LR projects. So the TDA should be amended on behalf of majority consensus. So that if majority of the people of the selected area have will to have the LR project to be launched then the Act should have the special and strong provision to justify for them.
- Recently the municipality has got new Act: "*The local government autonomous Act 1999*". In this Act Municipality has been given lot of authority. Now Municipality can impose very strong pressure to the government on behalf of the low-income people regarding the housing development within the municipality area. So municipality should develop its own housing policy a strong policy to open the door to public and private sector for the active participation in the urban housing sector.
- The NLRP project has taken long time for its implementation because of just to explain and to convince the people of the selected project area and to make understand them about objective of the project. It took more than one and half year. The reason is, most of the people in the project area are illiterate. They (the ordinary people) did not understand how the political workers were playing against the objective of the project to fulfil just their selfishness. This is why people became confused and became more suspicious about the project. So educated people and NGOs should be encouraged to play active role to make people aware for launching the LR project in the future.
- The main reason of delaying in completion of the infrastructure in this project is the release of the adequeqe funding in time. Because of inadequate and poorly managed funding the roads are now targeted to finish up to gravelled surface only. The service plots are not yet started to sold, which is blocking the cost recovery of the project. So government and municipality should be aware to manage the adequate fund for completion of the project timely. For this special provision of emergency project fund should be allocated beforehand in the municipality budget before commencement of such project. Otherwise it will be just wast of time and wast of money.
- The government has still not started the mass housing development from its own level so far. Except construction of some quarter for some high level government servant, government have not yet developed any public apartmental building. If not started by next decade it will be just disaster period for the urban housing. So more and more new LR projects should be promoted as far as possible.

On policy: The objectives of the government housing should be pursued with:

- Substantial increase in resource mobilization at town level,
 - Human resource development in the field of housing and urban development and planning,
 - Improvement in inter-sectoral integration ensuring better inter governmental working relationships,
 - Implimentation of land development programs with a view to guid the provision of infrastructure development,
 - Better utilization of infrastructure already in place,
 - Development of a consistent policy framework for development ensuring the integration of planning objectives with taxation, finance and law,
 - Better maintenance and operation of public utilities,
 - Better rural-urban linkage through the establishment of national urban system and hierarchy of town with clearly defined functional roles and
- substantial increase in political awareness among the local leadership and creation of local leadership on urban development.

On Strategy: To come over the existing LR implementation problem following strategies should be pursued :

- The local tax based should be strengthen and local level resources should be channelled to urban development efforts.
- The planning and implimentation capabilities of the municipalities should be strengthened. Replicable projects should be conceived,initiated,designed and implemented at this level. The municipality should strengthen urban development department (KMC/UDD) to design and guide action-oriented integrated planning process ensuring inter-agency integration and effective inter-institutional role-casting at the town level.
- People should be encouraged to organize themselves for housing development and urban improvement programms. People's participation in planning, implementing and cost sharing should be promotted. Small projects can be replicated more easily with greater impacts. NGOs should be encouraged to play a key role in mobilizing the people and people based organization.
- Arealistic as well as visible approach in the adaption of standards should be evolved and pursued. Land should be used as efficiently as possible.
- The movement from high cost, modern, high tech, capital intesive and centrally controlled services to low cost, traditional, low technology, labour intensive, incremental and locally controlled services should be facilitated.
- In order to increase income, employment and affordability, emphasis should be given to intesive agriculture, small scale industries and tourism.

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