

Business Plan-2014



Government of Nepal
Ministry of Urban Development
Department of Urban Development
and Building Construction
Babarmahal, Kathmandu

Government of Nepal

Hon'ble Dr. Narayan Khadka
Minister
Ministry of Urban Development
Singhadurbar, Kathmandu, Nepal



Phone : 977-1-4211792 (Off.)
Fax : 977-1-4211873 (Off.)
Phone : 977-1-5523031, 5520910 (Res.)
Email: nkhadka_ktm@hotmail.com
Website: www.moud.gov.np

Ref.No.:



Foreword

It is my pleasure to note that the Department of Urban Development and Building Construction (DUDBC) is going to publish the Business Plan – 2014 for the planned development of three sectors – Housing, Urban Development, and Building Construction in an integrated way.

The Plan is a formal document covering the Vision and Mission, Goal and Objectives, Benchmarks and Targets, Expected Results, Stakeholder's Analysis, Problems and Challenges, Strategic Interventions and Options, Inputs and Resources required to execute the activities for these sectors of the Department. The Plan will be implemented in accordance with the Department's Long Term Development Plan.

I hope that implementation of the Business Plan will guide the investment planning providing clear directions for both public and private sectors.

I would like to thank all the personnel and the agencies involved in the preparation of this document.

Dr. Narayan Khadka
Minister
Ministry of Urban Development
Singhadurbar
April 29, 2014



Ref. No.:-

Government of Nepal
MINISTRY OF URBAN DEVELOPMENT



Phone : { 4211693
4211883
4211673

Fax : 977-1-4211873

Singhadurbar,
Kathmandu, Nepal



Foreword

I would like to congratulate for the publication of the Business Plan – 2014 through the efforts of Department of Urban Development and Building Construction to achieve the planned development of the Housing, Urban Development and Building Construction. This plan is a formal guiding document of the department which is based on the long term vision. I am hopeful that the department will follow this document for the effective implementation of the development activities in the housing, urban development and building construction sectors.

Based on the establishment of new towns, renewal of old towns and settlements, improvement of physical infrastructure, safe and affordable housing as well as construction and maintenance of comfortable and attractive building, this document is prepared for short term, mid-term and long term development activities. Budgetary requirement and institutional arrangements are covered for the implementation of the activities in the document

I would like to congratulate Director General Mr. Shambhu K.C. of Department of Urban Development and Building Construction and all those who have been involved directly or indirectly in preparing this Business Plan.

Er. Kishore Thapa

Secretary

Ministry of Urban Development

Singhadurbar,

April, 2014



Government of Nepal
Ministry of Urban Development
Department of Urban Development & Building Construction
Babarmahal, Kathmandu, Nepal.

4262365

4262466

Ph.: 4262367

4262945

4262984

Fax: 977-1-4262439

Ref. No.:



Foreword

I am very glad to note that the Business Plan-2014 of this department is going to publish.

The plan has been prepared through the integration of the activities of the three sectors- Housing, Urban Development and Building Construction based on the long term vision. It is a formal document which lists a set of activities to be accomplished within a given time frame.

The plan has included the next five years program (2014-15 to 2018-19) which will be implemented through the department. The quality of the business plan will gradually improve over time through the continuous monitoring and evaluation (M and E) of the business activities.

The plan intends to draw and mobilize possible resources for the implementation of the activities based on the long term vision, mission, goal and objectives. In addition, it identifies various obstacles and risks in forth and tries to give alternative solutions for managing the risks.

This business plan will be helpful for guiding the three sectors- Housing, Urban Development and Building Construction where there is limited resources and also moving forward the activities in the right direction.

On the basis of this document, the investments indeed will be fruitful. This business plan will be very useful for the stakeholders to achieve the institutional goals and objectives.

I would like to thank the respected secretary Mr. Kishore Thapa, Joint Secretaries Mr. Suresh Prakash Acharya and Dr. Mahendra Subba of Ministry of Urban Development for providing their valuable advice and suggestions. I would also like to thank all the personnel of this department who provided their valuable contributions for the preparation of this plan.

Lastly, I would like to thank GIZ for helping us in the publication of this plan.

Shambhu K.C.
28 April 2014

Mr. Shambhu K.C

Director General

Department of Urban Development and Building Construction



Government of Nepal
Ministry of Urban Development
Department of Urban Development & Building Construction
Babarmahal, Kathmandu, Nepal.

4262365

4262466

Ph.: 4262367

4262945

4262984

Fax: 977-1-4262439

Ref. No.:



ACKNOWLEDGEMENT

It gives me immense pleasure on the occasion of the publication of the Business Plan -2014 which is prepared by the Department of Urban Development and Building Construction.

The Plan has been prepared through the integration of the activities of three sectors- Housings, Urban Development and Building Construction considering 20 years vision. The Plan will be updated at every 10 years intervals.

The long term vision of housing sectors is to provide safe, adequate and affordable housing by developing planned settlements. This will be achieved through fulfilled the housing needs for all within the next 20 years and developing institutional capacity of fulfilling the housing needs continuously even after 20 years period.

National Urban Policy 2007 has been mainly focused for the preparation of the Business Plan. The main objective of the urban development sector's National Urban Policy -2007 are to develop a balanced national urban structure, promote healthy and economically vibrant urban environment and strengthen the effective urban management.

The local self governance act-1996 recognizes 58 municipalities as urban areas. Besides these areas, small towns and market centers with urban characteristics and ten settlements along mid-hill highway are also included in business of urban sector.

Besides these, many new areas are urbanizing which demands the redefining of urban areas and classifying their hierarchies which would ultimately help in picturing the present urban structure vis-a-vis visualize the future areas with high urban growth potential and urban structure. The criteria for classifying the urban areas in one the five levels of urban areas have also been proposed in the plan.

The Business Plan of Building sector has been prepared on the basis of long term vision which is to make public and private buildings safe, durable, comfortable and cost effective by utilizing the local construction, materials and technology.

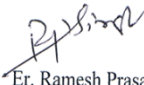
The Plan is a more than the Strategic Plan which covers the five years programs. The Plans is a candid evaluation of the performance gap of the preceding year and a ground work for the following year to make it more realistic and more result oriented.

I am confident that this Business Plan will be a very useful document for guiding the effective implementation of housing, urban development and building construction activities in a planned way.

My sincere thanks to the respected Secretary Mr. Kishor Thapa, Joint Secretaries Mr. Suresh Prakasa Acharya and Dr. Mahendra Subba of Ministry of Urban Development. I am very much thankful to Director General Mr. Shambhu KC, Deputy Director Generals Mr. Shiva Hari Sharma (Building Division Chief) and Mr. Sunil Kumar Karna (Housing Division Chief). Thanks also go to Senior Divisional Engineer Mrs. Sarita Shrestha Maskey and all the personnel involved directly or indirectly for providing advice and suggestion during preparation of this Business Plan.

In addition I would like to thank Mr. Padam Kumar Mainali, Senior Divisional Engineer of Ministry of Urban Development for the remarkable suggestions during the preparation of this document.

Finally, my thanks also go to the consultancy, Architecture Design and Planning Consultancy (Pvt.) Ltd. for the consulting service in integrating the three sectors Housing, Urban Development and Building Sector Business Plan Solution.


Er. Ramesh Prasad Singh
Deputy Director General
Urban Development Chief

Babarmahal
May 2014

Executive Summary

The present business plan is a consolidated form of the business plan separately prepared by Department of Urban Development and Building Construction (DUDBC) for three sectors: housing, building and urban development recently with an objective for the planned development. In the first chapter the subjects such as present organizational structure, need for business plan etc. have been included.

The second chapter is related to housing sector. The quantitative requirement of housing units required for the next 20 years planning period along with the existing situation of the housing sector has been analyzed here. It has been projected that during this period, there will be a total need of 15 lakhs housing units. Of this, 9 lakhs housing units will be required for the urban sector and 6 lakhs for the rural sector. Besides this, there will be a need of 3 lakhs and 90 thousands housing units for the deprived group. To meet above demands housing programme, deprived group targeted housing programme including institutional improvement programme etc. to be implemented under the government and private sectors have been proposed. There is a need of total investment of Rs.46 Kharba 60 Arba 9 Crores 61 Lakhs for this purpose during the next 20 years. This amount includes the housing to be constructed by the private sector on individual basis also.

The third chapter deals with the building sector. The quantitative analysis of the required number of buildings in the next 20 years planning period has been done together with analysis of the existing situation of the building sector. Accordingly, 1,453 new government building will have to be constructed annually and 44,816 government buildings will have to be repaired and maintained within the first ten years of the planning period. For this, building sector regulation, disaster minimization, conservation of local architecture and technology, use of innovative and new construction materials, building repair and improvement, new building construction, quality assurance of the buildings, financial attraction in building sector, government building special programme, institutional improvement programme etc. have been proposed. For this purpose there is a need of Rs.1 Kharba 61 arba 4 crores and 58 laks in the coming 20 years.

The fourth chapter deals with the urban development sector. The existing situation of the urban development sector along with the quantitative requirements during the next 20 years planning period has been explained. Accordingly, the major programmes which will be strategically important from the point of view of urban development and the programmes for the provision of minimum infrastructure facilities in the classified urban areas including the existing 58 municipalities into metro city, sub metro city, city, sub city and market centres based on the proposed new evaluation criteria within the next 20 years have been proposed. The establishment of new towns in the mid hill high way, establishment of the satellite towns in the influence areas of Pokhara and Nijgad airport, development of towns along Chinese and Indian border towns, infrastructure development as per cities identity, infrastructure development in strategic corridors, construction of bus parks in the major highways etc. have been proposed under this. For this purpose there is a need of Rs.1Kharba 84 arba 5 crores and 12 laks in the coming 20 years.

The activities such as expected improvement in the organization of the department, human resource development, necessary improvement in the legal stucture etc has been recommended in the last chapter of this report. It is expected that the result oriented and planned development of housing, building and urban development sector of the department will be achieved and the investment also will also be ensured with the implementation of this business plan.

Business Plan of Urban Development and Building Construction

Contents

BUSINESS PLAN OF THE DEPARTMENT OF URBAN DEVELOPMENT AND BUILDING CONSTRUCTION.....	1
1) Background.....	1
A) vision, mission, aim and objectives of Department of Urban Development and Building Construction.....	1
B) Need of Business Plan.....	2
2) Business plan of the Housing Sector.....	4
A) Study of existing policies and acts.....	4
B) Status of availability and demand for housing.....	5
C) Business plan and programme	13
D) Financial instruments for the implementation of plans and programmes...	37
3) Business plan of the Urban Development Sector.....	47
A) Analysis of existing legal structure/instruments and policy relating to Urban Development Sector.....	47
B) Existing situation of Urban development sector.....	48
c) Business plan and Programme	52
D) Financial instruments for the implementation of plans and programmes..	74
4) Business Plan of the Building sector.....	79
A) Analysis of existing legal instruments and policy relating to building...	79
B) status of availability and demand for government and non government buildings.....	83
C) Business Plan and programme.....	87
D) Financial instruments for the implementation of plans and programmes.....	126
5) Institutional Arrangement	134
A) Institutional Development.....	134
B) Human Resources Development.....	144
C) Budget Requirement for the Institutional and Human Resources	147
D) Legal and Policy Arrangement.....	147

Contents

Table 1 House and household number	6
Table 2 Ownership of the housing unit.....	6
Table 3 Population projection	7
Table 4 Quantitative requirement of housing production	10
Table 5 Quantity of housing targeted for the deprived groups.....	10
Table 6 Quantity of housing units requirement apart from/other than deprived group	10
Table 7 Quantitative requirement of the housing production.....	21
Table 8 Quantity of housing targeted to the poor	22
Table 9 Quantity of housing units requirement other than deprived group.....	23
Table 10 Annual proposed quantitative target of the housing sector	24
Table 11 Annual estimated cost.....	27
Table 12 Framework of the departmental programmes for the coming five years as per the proposed business plan of housing	29
Table 13 Description of programme wise annual investment requirement from the government level	33
Table 14 Description of programme wise annual investment requirement from the corporation sector	34
Table 15 Description of programme wise annual investment requirement from the organized sector	35
Table 16 Description of programme wise annual investment requirement from the private sector	36
Table 17 Investment requirement for the business plan period of 20 years	37
Table 18 Deficit budget and proposed sources to meet the deficit.....	46
Table 19 Urban Growth Patterns in Nepal.....	49
Table 20 Distributions of urban areas by eco regions.....	50
Table 21 Minimum Physical Infrastructure for Various level of Urban Sector	58
Table 22 Minimum Social Infrastructure for Various level of Urban Sector.....	60
Table 23 Minimum Economical Infrastructure for Various level of Urban Sector.....	61
Table 24 Proposed programs to develop within 20 years	64

Table 25 Strategic mega projects for next 0-5 years	67
Table 26 Strategic mega projects for next 5-10 years	70
Table 27 Strategic mega projects for next 10-20 years	72
Table 28 Trend in Budget allocation in Urban Development Sector	75
Table 29 Comparative Table for Required Investment and Allocated Budget	76
Table 30 Program wise Description of Required Yearly Investment.....	77
Table 31 Categories of the Building Code.....	81
Table 32 Analysis of the quantitative situation of the building sector	84
Table 33 Annual quantity of requirement of maintenance and construction of buildings	96
Table 34 Cost estimate of new building construction works	98
Table 35 Cost of building maintenance works.....	101
Table 36 Annual quantitative targets	104
Table 37 The framework of the departmental programmes for the coming five years as per the proposed business plan of the building sector	108
Table 38 Description of the Programme wise Annual Investment Requirement from the Government Sector	116
Table 39 Description of the Programme wise Annual Investment Requirement from the Corporation Sector.....	119
Table 40 Description of the Programme wise Annual Investment Requirement from the Organized Sector	119
Table 41 Description of the Programme wise Annual Investment Requirement from the Department of Urban Development and Building Construction.....	120
Table 42 Trend analysis as per programme booklet for the Fiscal Year 2068/69 BS	128
Table 43 Potential sources to fulfill the deficit	133
Table 44 Description of the existing manpower only for the housing sector	135
Table 45 Description of additional technical manpower necessary only for the housing sector	136
Table 46 Comparative study between the proposed plan and present trends	138
Table 47 Description of existing manpower only for the building sector	139
Table 48 Additional technical manpower required only for the building sector	140

THE DEPARTMENT OF URBAN DEVELOPMENT AND BUILDING CONSTRUCTION

1. BACKGROUND

A) Vision, mission, aim and objectives of the Department of Urban Development and Building Construction

Department of Urban Development and Building Construction (DUDBC) under Ministry of Urban Development (MUD), GoN has its origins from Department of Building. In 1962, Government of Nepal decided to do away with the then Public Works Department and established two separate departments such as Department of Road and Department of Building. This newly established Department of Building was primarily assigned the responsibility to carry out design, cost estimates, and supervision works of the government buildings. In 1971 Department of Building was reconstituted as Department of Housing, Building and Physical Planning. In the context of Nepal this department can be regarded as the pioneer institution in the field of physical planning. Again in 1987 in order to specialize the works of building and physical planning two separate departments – Department of Housing and Urban Development and Department of Building were created. This process continued even in 2000, these two departments were amalgamated to form the present Department of Urban Development and Building Construction to work as the main government agency responsible to work in building construction, housing and urban development sector in Nepal.

Roles and Responsibility of DUDBC and its Institutional Set-up

The long term vision of the department is:

- i. Safe, economical and environmentally friendly building construction
- ii. Affordable housing
- iii. Sustainable urban development

The objectives of the three divisions are as follows:

- i. Housing Division
Promote safe and affordable housing through development of planned settlements

Building Construction Division

Promote construction and development of safer, economical, and environmentally friendly buildings which also foster local architecture

ii. Urban Development Division

Promote sustainable urban development and urban rural linkages through development of modern physical facilities and conservation of cultural, religious, and historical heritage sites

The function and responsibilities of DUDBC are:

- i. Formulation, planning and implementation of urban policies
- ii. Formulation, planning and implementation of housing plans and policies
- iii. Design construction, repair and maintenance of the government buildings

DUDBC has 16 sections in 3 divisions. The Housing Division and the Building Construction Division covers all the districts including urban and rural areas. However, Urban Development Division, primarily concentrates its activities in 58 municipalities and some emerging VDCs of Nepal.

At the divisional level, DUDBC has 25 divisional offices (Class A=4, Class B=15, Class C=5). In addition to this, there is a Building Technology Research and Training Centre and a Special Building Construction and Maintenance Divisional Office for construction and maintenance of central government offices and official residences of President, Prime ministers, ministers and other high level central government dignitaries including Chief Justice, Judges, Speaker of Legislative body etc.

B) Need of Business Plan

A business plan is a formal document which lists a set of activities to be accomplished within a given time frame. Business plan should be based on a long-term plan. Preparing a business plan is an essential step for a public agency – the business goals being pursued by a public agency need not be for profit as such for a business enterprise to ensure that it knows:

- what its objectives are
- how the business options will be managed
- how the goals will be attained

A typical business plan should cover the following aspects:

- Vision and mission
- Goal and objectives
- Benchmarks and targets
- Expected results (outcomes and outputs)
- stakeholders' analysis
- Problems and challenges
- Strengths and opportunities
- Strategic interventions and options
- Core activities
- Inputs and resources required to execute the activities

A business plan is more than a strategic plan in the sense that it has to draw resources from the outside. It should generally cover a span of three years with a focus on the current year. The plan should have a candid evaluation of the performance gap of the preceding year and a ground work for the following year to make it more realistic and more results-based. It is generally a three-year rolling plan; every year, it will be revised adding one more year. This means, a new business plan will emerge again for three years with the second year becoming the first year and with one more year. The quality of the business plan will gradually improve over time through the continuous monitoring and evaluation (M&E) of the business activities.

2. BUSINESS PLAN OF THE HOUSING SECTOR

A) Study of existing policies and acts

National Shelter Policy 2012:

National Shelter Policy came into existence with required timely changes in the previous shelter policy to address the following things as well as to incorporate those issues which were not included in the Shelter Policy of 1996 keeping in mind the current political and social situation in the country and the development and changes that occurred in the shelter sector between 2053BS and 2063BS.

- To assign implementation responsibilities and authorities of shelter policy at central level.
- To make provision of housing for deprived homeless and families displaced due to the implementation of major projects and natural disaster.
- To manage for alternative shelter for the unplanned settlements existing in different cities by assigning priority to families living in the unsafe places.
- To minimize the likely risks and damages resulting from natural and manmade disaster in residential areas.
- To identify possible measures with regard to rental housing taking into consideration its different aspects including the security of tenure of the renters and formulate act and regulations as per necessity.

Vision, mission and objectives of National Shelter Policy, 2012 are:

Long term vision

- To provide housing, which is safe, adequate and affordability to all.

Mission

- To develop the concept of housing by including the families remaining below the poverty line and residing in unplanned and unsafe settlements.

Objectives

1. To increase appropriate, safe and environment-friendly production of housing suitable to all income groups and to upgrade the existing housing.
2. To mobilize effectively the financial resources necessary for the development of housing.
3. To carry out institutional reforms by clarifying the roles of governmental, non-governmental, private sector and communities in housing sector.

B) Status of availability and demand for housing

According to the result of national population census of 2068, the total population of Nepal has reached 2,64,94,504 which is more by 34 lakhs compared to last census of 2058. The total population of Nepal in 2058 was 2,31,51,423. In this way the population has increased by 15 per cent within ten years. The exponential population growth during the last decade on average was 1.35 per cent. The average annual population growth has remained 2.25 per cent from 2048 to 2058.

House and household

The number of household which was 42,53,220 in 2058 increased by 22 per cent and has reached to 54,27,302 which means an addition of 11,74,082 household within ten years. Of the total 54, 27,302 households, 4005 are the institutional households (Barrack, hostel, Gumba etc) and the rest are the domestic households. The average household size is 4.88 members. Rautahat has the highest household size accounting for 6.44 and Kaski has the lowest accounting for 3.92 members.

Table 1 House and household number

Census year	Population	Household number	Household size		
			Total	Urban area	Rural area
2058	2,31,51,423	42,53,200	5.44	4.85	5.55
2068	2,64,94,504	54,27,302	4.88	4.32	5.02
	Urban 45,23,820	Urban 10,47,297			
	Rural 2,19,70,684	Rural 43,80,005			

Household number and ownership of housing unit

Of the country's total 54,23,297 households, 85.26 per cent households are living in their owned houses while 12.81 per cent in the rented houses. In the urban areas, about 40 per cent of the households are living in the rented houses.

Table 2 Ownership of the housing unit

Place	Household number	Ownership			
		Self owned	Rent	Institutional	Others
Nepal	54,23,297	46,23,653	6,94,701	34,313	70,630
%	100	85.26	12.81	0.63	1.30
Urban	10,45,575	5,93,842	4,20,483	17,392	13,858
%	100	56.80	40.22	1.66	1.33
Rural	43,77,722	40,29,811	2,74,218	16,921	56,772
%	100	92.05	6.26	0.39	1.30

Balance between demand for and supply of housing

The main basis of the formulation of the national housing plan is the housing needs projection. There has been less growth in the population according to the result of the national population census of 2068. The population projection using exponential growth rate based on the population census results of the past, indicates that the total population of Nepal is expected to reach 3.40 crores by 2078 and it may exceed 3.54 crores by 2080.

Table 3 Population projection

Census year	National population	Urban population	Rural population	Urban population %	Rural population %	Urban household number	Rural household number
2028	1,15,55,983	4,61,938	1,10,94,045	4.0	96.0		
2038	1,50,22,839	9,56,716	1,40,66,123	6.4	93.6		
2048	1,84,91,097	16,82,274	1,68,08,823	9.1	90.9		
2058	2,31,51,423	32,27,879	1,99,23,544	13.9	86.1		
2068	2,64,94,504	45,23,820	2,19,70,684	17.1	82.9	10,45,575	43,77,722
2078 a	3,39,94,453	91,22,848	2,48,71,605	26.8	73.2	21,46,552*	49,74,321*
2080 a	3,54,46,922	1,02,40,708	2,52,06,213	28.9	71.1	24,09,578*	50,41,243*

Note: "a" means estimated * - Household size of 4.25 members and ** - household size of 5 members

Based on the above fact, it can be estimated that the urban population in the next census year (2078BS) will increase from 45 lakhs to 91 lakhs and similarly rural population from 220 lakhs to 249 lakhs. Similarly, within the planning period in the coming ten years (BS2080), the total urban and rural population is expected to reach 102 and 252 lakhs respectively. Accordingly, the urban population will increase by 57 lakhs and rural population by 33 lakhs compared to 2068 census

For the projection of housing needs, the urban and rural household size has been taken as 4.25 and 5 members respectively based on the need of one housing unit per one family though the existing household size is 4.32 and 5.02 members respectively. According to this, by the end of 2080BS, the number of household (need of the housing unit) in urban and rural area would be about 24,09,578 and 50,41,243 respectively.

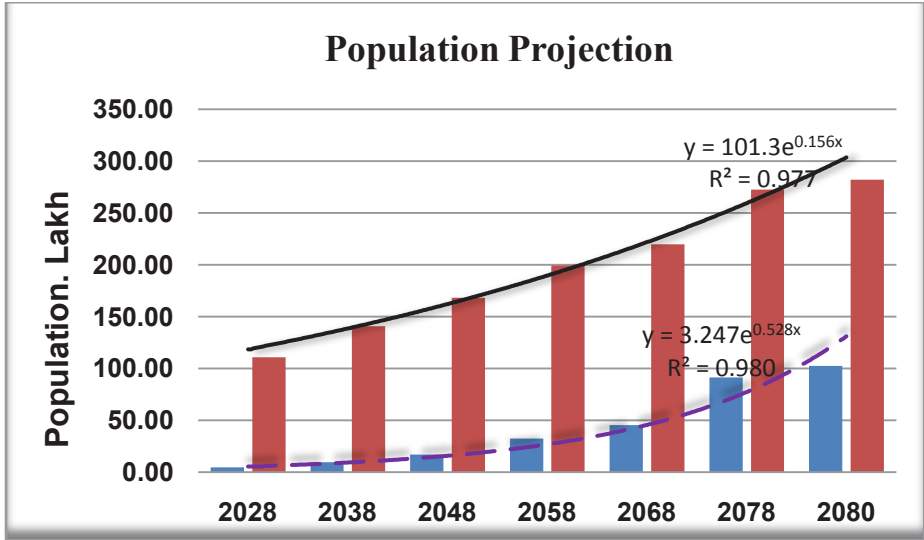


Figure 1Population Projection

There will be a total need of 20 lakhs and 23 thousands additional housing units during the first 10 years of plan period. Based on the estimate, there will be an additional need of 13.62 lakhs households in urban areas and 6.61 lakhs households in the rural areas. In the year 2068 B.S., taken as a base year, existing household number was 10.46 and 43.78 lakhs in urban and rural areas respectively. Of the total housing needs of 13.62 lakhs units in the urban areas, 4.08 lakhs units or 30 percent of the demand is expected to be fulfilled by the addition of extra rooms or floors in the existing houses while the remaining 70 per cent or 9.54 lakhs housing units will be fulfilled by the construction of the new housing units. Similarly in the rural areas, of the total housing need of 6.61 lakhs units, 0.99 lakhs units or only 15 per cent of the

demand is expected to be fulfilled by addition of extra rooms or floors in the existing houses and therefore there is a need to construct 5.62 lakhs new housing units in the rural areas. Accordingly, there is a need to construct a total of 15 lakhs 16 thousands new housing units during next 10 year period.

Table 4 Quantitative requirement of housing production

Description	Total	Urban	rural
Requirement of housing units in 2080 BS (coming ten years)	20,00,000	13,00,000	7,00,000
Addition of just rooms and floors (urban 30% and rural 15%)	5,00,000	4,00,000	1,00,000
New construction	15,00,000	9,00,000	6,00,000

Of the total housing needs there will be a need of 3 lakhs housing units only for the deprived groups in the coming ten years based on the available data from the national population census, economic survey and Poverty Alleviation Fund.

Table 5 Quantity of housing targeted for the deprived groups

Description	Total	Urban	Rural
Total poverty in percentage (As per Economic Survey Report, 2068)	(25)	15	27
Housing units which will be addressed by adding rooms and floors	90000	60000	30000
Housing units to be newly constructed	300000	150000	150000
Total required housing units	390000	210000	180000

Table 6 Quantity of housing units requirement apart from/other than deprived group

Description	Total	Urban	Rural
Housing units to be addressed by adding rooms and floors	410000	340000	70000
New housing units to be constructed	1200000	750000	450000
Total required housing units	1610000	1090000	520000

Medium and high income group targeted housing

a) Land Development Programme

The expected results from Kuleshwor and Galfutar site and services project have not been achieved from the planned land development programme implemented under the government initiatives but these project made available about 1200 developed plots. Compared to site and services programme, land pooling programme is becoming more popular at present and they are implementing effectively in the country. Land pooling programme, which is so far, mostly confined within the Kathmandu Valley, has been gradually extending outside the valley. Uptill now 11000 developed plots have been produced from the completed land pooling projects in the Kathmandu Valley which were implemented in 4500 ropanis of land. From the on going land pooling projects under implementation in 8000 ropanis of land will produce about 15000 developed plots. Similarly, the Kirtipur second phase project and Nakhudole land pooling project planned for implementation in 1200 ropanis of land in near future is expected to produce about 3000 developed plots. Generally, though it is claimed that the developed plots are targeted for the medium and high income groups, but in reality only high medium income groups and upper income groups seems to have the capacity or affordability to purchase these developed plots.

b) Group and apartment housing

There has been fast growth in group and apartment housing since last decade with the implementation of Apartment Act and Regulation. These housing have been implemented under the monitoring of DUDBC to regulate planned housing in an institutional and legal manner.

c) Housing constructed by the private sector

Apart from the group and apartment housing being constructed by the organized sector, almost 90 per cent of the residential houses are still being built by the private sector uptill now. In fact, the houses which are built in an individual and family level is the characteristic of housing in rural and urban areas of Nepal. In this process, the entire works required to be done for the construction of the houses are done by the house owner itself. Generally, the role of professional technician is confined to the preparation of design and plan of the house for to get building permit from the municipality. On the

whole, there is still a prevalence of social value system which says 'son will not be a son until he builds a house.

d) Other plans

In the context of unplanned development of settlements even outside the existing present Ring Road of Kathmandu Valley, the Outer Ring Road project in Kathmandu Valley and similarly Biratnagar Ring Road project are currently under implementation to address this issue. These projects are also to achieve planned development of the cities with the provision of necessary physical infrastructures facilities and services. Although these projects may be claimed as the road project, however the necessary land required for the construction of the roads will be mobilized by adopting land pooling method therefore these projects are also directly related to housing. If the project is successfully implemented, Biratnagar Ring Road project alone will make available around 40,000 developed plots.

Status of housing targeted to deprived group

a) Janata Awas Karyakram (People's Housing Programme)

The article 33 part (Ja) and (Jha) of the Interim Constitution of Nepal, 2063 guarantees the establishment of the right to education, health, housing, employment and food security to all citizens. It has been stated that it shall be the responsibility of the state to guarantee the provision of social and economic security including the land for those groups who are socially and economically backward. In order to fulfil this objective, the government of Nepal has implemented Janata Awas Karyakram (People's Housing Programme) from the Fiscal Year 2066/67 in three districts such as Siraha, Saptari and Kapilvastu to provide housing by constructing low cost modern housing for Dalit and deprived Muslim families. Altogether a total of 2274 houses in the settlements of 17 villages of Siraha, Saptari and Kapilvasu districts is in the process of completion which was started with the budget of Rs 30 crores being allocated to Department of Urban Development and Building Construction under its annual programme of FY 2066/67. Taking into consideration the popularity and usefulness of the programme, the budget of FY 2067/68 also continued this programme by including the settlements of Chepang, Raute and Kusunda under this programme and the policy has been established to include other ethnic groups and communities in future. As per the decision of the government of Nepal, this programme has been implementing through DUDBC to provide housing to Dalits, adibashi, Janajati, minority, backward and marginalized other groups. Presently, this programme has been extended to 23 districts. Up to now altogether a total of 3653 housing units have been constructed.

b) Rehabilitation of free bonded labour (kamaiya)

The government has banned or prohibited to use any individual as a bonded labourer directly and indirectly for works by declaring free the bonded labourer of Dang, Bardia, Kailali and Kanchanpur who had been forced to work and stay in others houses for a long period of time on Srawan 2, 2057BS after clearing the loan being borrowed by bonded labour. As per Bonded Labour Rehabilitation Implementation Committee of Bonded Labour Rehabilitation Problems Solving Commission under Land Reform and Management Ministry, there are 27,570 bonded families. Of them, up till now 23,857 families have been rehabilitated and still 3713 families are remaining to be rehabilitated. Government has been rehabilitating bonded labourers families by purchasing the land equivalent to Rs.150,000 and also providing cost for the construction of the house and timber besides implementing different skills oriented and income generating programmes.

C) Business Plan and Programme

The following are the proposed long term vision, mission and goals of the business plan for twenty year's period in the context of the housing sector:

Long term vision

To provide safe, adequate and affordable housing by developing planned settlements.

Mission

To create a situation which ensures housing to all including the families living in the unplanned settlements, deprived and land less families with minimum services and facilities for human beings.

Goals

To fulfil the housing needs for all within the next twenty years.

To develop institutional capacity for fulfilling housing needs continuously even after twenty years period.

Working policies and actions plans

The following working policy has been adopted to achieve the targets as per long term vision, mission and goals of this business plan:

Working policies

- To implement land development programmes in an institutional manner in order to remove the existing difficulties in the acquisition and availability of the land for the purpose of housing.
- To encourage the general public through the demonstration effect by constructing and developing settlements with the use of green building technology to save energy and cost in effective manner.
- To increase in the production of housing by encouraging the private sector in the production of housing plots through planned land management and production of rental housing , individually owned housing ,cooperative housing, group and apartment housing.
- To fulfill as an alternative of safe housing needs by adding floors and improvements in the existing houses.
- To implement different programmes by addressing the housing needs of the deprived groups as a fundamental right.

To develop and enhance the capacity of the housing sector through the activities like increasing the financial self reliance in the housing sector, formulation and implementation of different acts and institutional improvements etc.

Action Plans

The programmes have been formulated by dividing housing services basically into four categories to provide safe,adequate and affordable housing to all as conceived by the broader goals and long term vision of the National Shelter Policy,2012 and to achieve the objectives based on the strategies and working policies as directed by such policy.

a) Involvement of the institutional sector in the housing service

It is not desirable to involve the institutional sector in the production and distribution of the general type of housing when there is already adoption of liberal economic policy or competitive economic system. But the role of the institutional sector may be indispensable in the production and distribution of the housing for few targeted groups who are economically deprived or lack the capability in the production of the housing for various reasons. For this the targeted programme has been proposed in a separate heading in this business plan.

The programmes to be implemented with the involvement of the institutional sector in housing service is targeted to the activities like development of plots through land development. The objectives of the land development programme will be achieved through the implementation of the various programmes such as development of the Outer Ring Road in the Kathmandu Valley and Biratnagar Ring Road programme etc.

Though land development programme, like land pooling project is claimed to be an effective instrument towards the planned housing production as well as for the management of the housing facilities in the present context, its use is feasible only in the open urban areas. It has become necessary to introduce house pooling programme like land pooling programme for the conservation of the ancient cities having historical and archaeological significance and for the management of the unplanned housing as well as to control house fragmentation being taking place currently in those places. The plan recommends to implement this programme in a few places of dense city core area of Kathmandu as a model for the time being. As these type of programmes manage and mobilize the required financial resources by selling plots and housing therefore only the operational fund is proposed for this type of plan in this business plan.

The model housing programme is also proposed for the production and demonstration of different types of houses to encourage and to increase public awareness to make cost effective construction by using traditional technology and skills as per local needs and to make housing units environment friendly, energy efficient as well. The buildings produced in this way is recommended to be used as government employees quarters.

The small settlement development programme with necessary infrastructures and facilities is also proposed by relocating the present scattered housing units into a compact settlement in the rural areas as the provision of services in such a scatter settlement is very costly. This programme is totally different from the present compact settlement programme in the form and objectives as this is going to be resettled in a new places. The concept of compact settlement programme is to attract the migration of people with the provision of necessary services and facilities in an attractive and convenient location however the proposed small settlement development programme attempts to relocate the settlements itself in and around the same place without changing present employment and services. This programme reduce the cost in the provision of infrastructure services and facilities by developing the existing settlement by swapping the land presently occupied by the portion of housing.

It would be appropriate to implement the proposed programmes by Department of Urban Development and Building Construction and its concerned offices , Kathmandu Valley Development Authority, different town development committiees,local authorities and the corporation with full or partilal ownership of the Government of Nepal etc. as the implementation of the proposed programmes may require to exercise certain legal rights which can be used only by such entities.

The financial resources required for the proposed programme under this heading will come from the budgetary allocation system of the Government of Nepal and from the annual programme budget approved by the management committee of the concerned corporation and the human resources is expected to be met by the existing professional staff presently working in those institutions.

b) Involvement of the private sector in the housing service

The involvement of the private sector in the housing production has remained remarkable in Nepal. The major role particularly in the production of housing lies in the individual itself and it has not been very long that private sector has started contributing in the housing production. Generally 90 per cent of the total residential houses are being built on individual basis and the involvement of the technicians has been negligible in these buildings. From this point of view, most of the residential buildings are not safe in the context of disaster management. Therefore, different activities like, increase in the production and upgrading of different types of the housing units to make the existing buildings safe and cost effective have been proposed under this heading.

The apartment housing production is given prominence under this heading. The apartment housing plan is proposed where the ownership of the housing could be individual and communal or institutional for the rental purposes under this. It has become indispensable to create an environment to internalize the culture of apartment housing due to lack of land and ever increasing prices of the land in the urban areas. Currently some of the apartment housing units have remained unused in the major cities while the others have rented out without using by the owners which may create the confusion that there has been more production of the apartments than required. But the reality is that the cost of the apartments is beyond the affordability of the majority of the common people which will be clear from the analysis in the different sections. Therefore, it is necessary to maintain different level of services and facilities targeting to different income groups in the production of apartment housing units too.

The other type of housing produced by the private sector in an organized manner is group housing. This type of group housing is in priority option for those who can afford it for the reason that it has its own private compound with 24 hours electricity and water supply as well as community security. This is also an easy option to avail the housing service for those who are very busy and living abroad as it does not require getting involved in the construction works and purchasing of land for the construction of the house.

The programme to facilitate cooperative housing has also been proposed under this heading in order to manage the practice of constructing the housing in a cooperative manner by different communities with similar view and economic condition.

The programme to address the housing needs by addition of floors and rooms as well as by repair and maintenance of the existing structures has also been proposed here as an alternative measure to fulfill the housing needs under this heading.

The role of individual house owners has remained the great in the fulfillment of housing demand. The practice of constructing houses by the individuals using their own resources as per their needs is very much popular everywhere. The housing units being built by the general people is going to address the major portion of the housing needs therefore it must be mentioned as the major activity in the housing sector. The individual housing units constructed in this manner is not only used for their own use or for the rental purposes but in many cases it is also mixed used. Therefore, the buildings which have taken building permit for specific use should not be allowed to make change in its use. There is a need to regulate approval process for the mix use during the process of getting approval.

There is a need of serviced plots to address the housing needs not only in the coming 20 years time period but beyond this also. For the fulfillment of the housing demand, the first requirement is the land as the overall development of the housing may take long time. From this point of view, the land management programme has been proposed under this heading to encourage the involvement of the private sector in the production of the housing including the housing plots within the approved by laws and guidelines.

The financial and human resources required for the proposed programmes under this heading will have to be managed by the private sector and individuals concerned with private housing sector. However to ensure the progress as per the targeted indicators the facilitation and enabling activities will have to be done from the government level. For this the provision like the financial grants may be necessary in the annual programmes.

c) Housing service targeted to the deprived group

The concept of housing for all has been propounded by the National Shelter Policy, 2012 by recognizing housing as the basic needs of all. In this context, it is necessary to address the housing demand of the deprived groups, marginalized communities, dalits, landless families and single women discarded by the families, senior citizens, physically disabled individuals, and orphans. Several activities have been proposed in this regard under this heading. It is also recommended to implement some additional programmes besides continuing the Janata Awas Karyakram (People's Housing

Programme) and people oriented community housing programme presently under implementation. The programme of developing the concept of land bank has also been proposed targeting to the landless farmers, bonded free labour Kamaiys including different families. The land area necessary for the community farming under community ownership for livelihood. The construction of intensive settlement with communal facilities and services as an alternative for housing has been proposed in this area. Under the Environmental Sustainability of MDGs Goal 7 Target 11, it is mentioned to improve significantly the lives of the 100 million people living in the unplanned settlements by 2020. The programme for the provision of planned housing is also recommended in this business plan. The programme to provide planned housing by relocating the squatter families living along the river banks is also recommended, as an effort towards the improvement of the unplanned settlements as one of the indicators to bring improvements in the lives of the people. It is made compulsory to make payments in 25 years time period on installments basis to recover actual construction cost and to deliver message that government will not provide housing free of cost. Further to control the encroachment of the government land as well as to discourage the expansion of the unplanned settlements in this programme.

Generally the private sector is not involved in profitless activities except in the fulfillment of corporate social responsibilities motivated by social service spontaneously. Therefore, it will not be wise idea to expect the involvement of the private sector in the construction of the housing for physically and economically weak individuals who build their own houses by themselves. The responsibility to address the housing needs of the deprived and economically weak groups lies in the state's instrument unless the act creates an environment of responsibilities whereby the housing developers requires to make available certain percentage of housing units to such deprived or economically weak groups. However, the necessary resources can be mobilized for the implementation of this programme by partnership/joint venture with non-profit national and international non governmental organizations committed to social works.

d) Capacity enhancement for the management and regulation of the housing service

There is no comparable role of the management and regulation aspect towards maintaining the identity of housing service as an industry. For this there is the need to establish appropriate agencies and to enhance the capacity of the existing organizations together with proper understanding and coordination among the concerned stakeholders. Therefore, the programmes relating to

institutional improvement and capacity enhancement are proposed under this heading.

The first requirement is the adequate financial support in order to produce housing as per needs. Therefore, there is a need to establish an appropriate financial instrument to encourage and increase investment in housing sector. In this regard, it is realized that there is a need to establish housing investment board at national level to provide housing loan at concessional rate to deprived groups as well as to increase investment in the housing sector.

In order to manage housing business as a service and as an industry, it is necessary to develop different legal system including the implementation of the proposed 'land and housing business' bill by making it as an act to be used as the facilitation instrument therefore the programme relating to this has been proposed.

Housing is not only land or a house but it is a composite form of infrastructure of living and non living things including physical, social, cultural. Therefore, there is a need to carry out study, research and application continuously and massively to make housing technology as per time, pragmatic and usable. For this also a programme has been proposed.

The different institutional improvement programmes like capacity enhancement of the manpower involved in this sector, to develop appropriate instrument to ensure the progress as per this business plan, to play the role of leadership by Department of Urban Development and Building Construction for the regulation and management of the housing sector etc. have been proposed.

For the programmes proposed under this heading, it would be appropriate to implement on the basis of coordination and joint venture among entire agencies for the mobilization of the resources as it is related to the capacity development of all the concerned stakeholders.

Phase wise plans and programmes

In order to determine the quantitative needs of the works mentioned above firstly, there is a need to analyze the number of the housing needs. The quantities mentioned in the chapter of present housing condition and projected needs is listed in the following table.

Table 7 Quantitative requirement of the housing production

Description	Total	Urban	Rural
Housing requirement in 2089 BS (in the coming 20 years)	3800000	1026000	2774000
Adequate with addition of floors or rooms (Urban 30% and rural 40%)	1418000	308000	1110000
New construction	2382000	718000	1664000

Of the total housing needs as shown in the Table 7 above, there will be a deficit of 5 Lakh and 67 thousands housing units only for the deprived families in the coming 20 years time based on the reports of population census, economic survey and the poverty alleviation fund. According to this, even after implementing different types of the programmes to provide housing to the deprived families there will again be the deficit of 4 Lakh and 18 thousands housing units therefore the following programmes have been proposed to achieve the objectives of providing housing to all deprived families with the provision of simple housing loan for those families who could not be catered by the these programmes.

Table 8 Quantity of housing targeted to the poor

Description	Total	Urban	Rural
Total poverty in percentage(As per Economic Survey Report)	25	15	27
Housing units to be newly constructed	567000	111000	456000
Housing programme targeted to the poor			
Poor oriented community housing programme (5000 units per year)	100000	0	100000
Squatter housing provision as per MDGs (100families per year)	2000	2000	0
Apartment housing for the urban poor (25 families per year in 10cities)	5000	5000	0
Cooperative farming and land bank programme(500 families per year	10000	0	10000
Housing improvement programme as Ashram and Correction centre	2000	1000	1000
Low cost rental housing programme (500 families per year)	10000	5000	5000
Some percentage of low cost plots in private housing programme	20000	10000	10000
Concessional /subsidized housing loan programme	418000	88000	330000
Total	567000	111000	456000

Once the deprived group targeted quantities is addressed by different programmes, the following programmes as per the table below is required for other groups.

Table 9 Quantity of housing units requirement other than deprived group

Description	Total	Urban	Rural
Quantity of housing units requirement other than targeted to the poor	1815000	607000	1208000
Housing production programme			
Apartment housing (3000 units per year	60000	60000	0
Group housing (Colony, 1500 units per year) _	30000	30000	0
Land pooling and demonstration house pooling (1000 plots per year)	200000	50000	150000
Housing plots facilities (Private plotting 20000 per year)	400000	100000	300000
Demonstration/model settlement development (100 families per year in 5 places)	10000		10000
Model housing programme (50 units per year)	1000	200	800
Rental housing (5500 per year)]	110000	60000	50000
Use controlled individual housing with necessary loan	1004000	306800	697200
Total	1815000	607000	1208000

Despite the contribution of the government sector, corporation and other institution in the fulfilment of the total housing needs in the coming twenty years period there will still be a deficit of 10 lakhs housing units and the construction of such housing units will have to be done by the house owners themselves. Therefore the role of general public in the construction of the private houses on individual basis in housing sector will be remarkable in this period.

The annual quantitative targets of the programmes which needs to be implemented in the coming 20 years period has been determined taking into consideration the realistic approach regarding the fulfilment of housing by

government, corporation, other organized sector and private or individual sector during the process of housing production as per the quantities of different programmes in the following way.

Table 10 Annual proposed quantitative target of the housing sector

S. No	Major programme	Indicator or quantity	Unit	Annual quantitative target				Total
				Government	Corporation	Institutional	Individu	
1	Housing development from the institutional sector							
	a) Land and model house pooling	200000	Plots	8000	2000			10000
	b)Model housing plan(Employees)	1000	Plots	25	25			50
	c)Small settlement development with working policy	10000	Plots	100	400			500
2	Housing development from the private sector							
	a)Apartment housing	60000	Family			3000		3000
	b)Group housing	30000	Family			1500		1500
	c)Private/individual housing	1004000	Family				50200	50200
	d)Housing maintenance, improvement and extension	1418000	Family				70900	70900
	e)Rental housing	110000	Family			5500		5500
	f)Land and management (plotting)	400000	Plots			20000		20000
3	Deprived group targeted housing							
	a)Poor oriented community housing	100000	Family	3000	2000			5000

S. No	Major programme	Indicator or quantity	Unit	Annual quantitative target			
				Government	Corporation	Institutional	Individu Total
	b) Land bank cooperative farming plan	10000	Family		500		500
	c) Urban poor apartment housing	5000	Family	250			250
	d) Squatters housing plan MDG	2000	Family	75	25		100
	e) Housing for women, weak, old, street children,	2000	Individual	100			100
	f) Low cost rental housing	10000	Family		500		500
	g) Percentage provision in private housing	20000	Family			1000	1000
	h) Concessional loan management plan	418000	Family		20900		20900
4	Institutional capacity extension						
	a) Establishment of National Housing Bank and operation		Program				
	b) Legal structure development	1	Program		1		1
	c) Study of local and modern technology	2	Program	1	1		2
	d) Institutional improvement plan	1	Program	1			1
		4		2	2		4

Note: Corporation here refers Kathmandu Valley Development Authority, National Housing Company and proposed National Housing Bank.

Annual estimated cost

Based on the experience, the average rate for the whole country has been used to determine the investment to be made by different sectors to achieve the annual quantitative targets proposed in Table.10. The cost of the housing in different parts of the country differs due to shape, structure, type of architecture, construction materials used etc. Though the actual rate may differ to some extent however it is believed that the estimate has been done based on experience therefore there will be no substantial difference in the estimates. Similarly, the financial investment has been determined by assuming the cost of construction will increase by 10 per cent annually in twenty years time period and government also increase the allocation of budget every year by 10 per cent.

Table 11 Annual estimated cost

S. No.	Major programme	Annual quantity	Rate per unit Rs.	Investment requirement in the base year Rs.in '000				
				Government	Corporation	Institutional	Individual	Total
1.	Housing development from the institutional sector							
	a) Land and model house pooling	10000	1000	8000	2000	0	0	10000
	b)Model housing plan(Employees)	50	100000	2500	2500	0	0	5000
	c)Small settlement development with working policy	500	50000	5000	20000	0	0	25000
2.	Housing development from the private sector							
	a)Apartment housing	3000	2000000	0	0	6000000	0	6000000
	b)Group housing	1500	2500000	0	0	3750000	0	3750000
	c)Private/individual housing	50200	1000000	0	0	0	5020000 0	50200000
	d)Housing maintenance, improvement and extension	70900	100000	0	0	0	7090000	70900000
	e)Rental housing	5500	1000000	0	0	5500000	0	55000000
3.	f)Land management (plotting)	20000	300000	0	0	6000000	0	60000000
	Deprived group targeted housing							
	a)Poor oriented community housing	5000	180000	540000	360000	0	0	900000
	b)Land bank cooperative farming plan	500	200000	0	100000	0	0	100000
	c)Urban poor apartment housing	250	500000	125000	0	0	0	125000
	d)Squatters housing plan MDG	100	500000	37500	12500	0	0	50000
e) Housing for women, disabled, old, street		100	50000	5000	0	0	0	5000

S. No.	Major programme	Annual quantity	Rate per unit Rs.	Investment requirement in the base year Rs.in '000			
				Government	Corporation	Institutional	Individual
	children,						Total
	f) Low cost rental housing	500	500000	0	250000	0	250000
	g) Percentage provision in private housing	1000	500000	0	0	500000	500000
	h) Concessional loan management plan	20900	40000	0	836000	0	836000
4.	Institutional capacity extension						
	a) Establishment of National Housing Bank and operation	1	1000000 0	0	10000	0	0
	b) Legal structure development	2	500000	500	500	0	0
	c) Study of local and modern technology	1	1500000	1500	0	0	0
	d) Institutional improvement plan	4	1000000	2000	2000	0	0
			Total	727000	1595500	21750000	57290000
							81362500

The analysis of the estimated investment required for the coming 20 years based on this estimates and financial structure together with the possible financial sources is presented in the following chapter.

Five Year Plans and Programmes

Business plan is prepared for three to five years as mentioned in the beginning of this report. The framework of the departmental programmes for the coming five years under the housing as per the business plan is presented in the following way.

Table 12 Framework of the departmental programmes for the coming five years as per the proposed business plan of housing (Proposed budget in Rs. Lakh)

SN o.	Major programme	Year 1		Year 2		Year 3		Year 4		Year 5	
		Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget
1		<u>Housing development from the institutional sector</u>									
a_	Land development plan and model house pooling	10000 plots through pooling in different districts	70	10000 plots through pooling in different districts	78	10000 plots through pooling in different districts	72	10000 plots through pooling in different districts	82	10000 plots through pooling in different districts	93
		Feasibility study of house pooling in Kathmandu	10	Preliminary works of model house pooling in Kathmandu	10	Model house pooling in Kathmandu	25	Model house pooling in Kathmandu	25	Model house pooling in Kathmandu	25
b_	Model house to be used by	Model house of traditional	25	Energy efficient ad	28	Model house of traditional	31	Model house of traditional	34	Energy efficient ad	37

SN o.	Major programme	Year 1		Year 2		Year 3		Year 4		Year 5	
		Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget
c _	the employees	technology (50 targeted families)		environment friendly housing (50 targeted families)		technology (50 targeted families)		technology (50 targeted families)		environment friendly housing (50 targeted families)	
	Working policy for Compact settlement of scatter houses and development of small settlement	Formulation of working policy for compact settlement of scatter houses and implementation	50	Development of small settlement as per working policy	55	Development of small settlement as per working policy	61	Development of small settlement as per working policy	67	Development of small settlement as per working policy	74
2	<u>Housing development targeted for deprived group</u>										
a _	Poor oriented community housing	Formulation of working policy and production and distribution of 5000 houses	5400	Production and distribution of 5000 housing units	5940	Production and distribution of 5000 housing units	6534	Production and distribution of 5000 housing units	7187	Production and distribution of 5000 housing units	7906
b _	Urban poor apartment housing	Construction of 250 apartment housing for the	1250	Construction of 250 apartment housing for the	1375	Construction of 250 apartment	1513	Construction of 250 apartment	1664	Construction of 250 apartment	1830

SN o.	Major programme	Year 1			Year 2			Year 3			Year 4			Year 5		
		Programme	Budget		Programme	Budget		Programme	Budget		Programme	Budget		Programme	Budget	
c_	Squatters housing provision as per MDG plan	urban poor			urban poor			housing for the urban poor			housing for the urban poor			housing for the urban poor		
d_	Housing for women, weak, old, street children	Construction/ upgradation of houses for 100squatters families	375		Construction/ upgradation of houses for 100squatters families	413		Construction / upgradation of houses for 100squatters families	454		Construction/ upgradation of houses for 100squatters families	499		Construction / upgradation of houses for 100squatters families	549	
		Distribution of housing facilities for 100 single women	50		Distribution of housing facilities for 100 physically weak individuals	55		Distribution of housing facilities for 100 discarded olds	61		Distribution of housing facilities for 100 street children	67		Distribution of housing facilities for 100 discarded olds	74	
3	<u>Institutional improvement</u>															
a_	Establishment of National Housing Bank and operation	Formulation of legal instrument for the establishment of National Housing Bank	(100)		Completion of initial works for the establishment of National Housing Bank	(110)		Establishment and operation of National Housing Bank	(121)		There is no need of government budget as it will operate as a corporation after this.					
b_	Improvement in legal	Updating housing related	3		Formulation of regulations,	3		Housing related	3					Review of housing	5	

SN o.	Major programme	Year 1		Year 2		Year 3		Year 4		Year 5	
		Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget
	structure	acts Rental housing policy and rules	2	amendments Rental housing guidelines	3	guidelines Guidelines to related housing	4	Guidelines to related housing	8	policy Legal instrument as per policy	4
c_	Study of local and modern technology	3 Studies and research about technology	15	3 Studies and research about technology	17	3 Studies and research about technology	19	3 Studies and research about technology	21	3 Studies and research about technology	23
d_	Institutional capacity enhancement	Training, seminar, study tours	17	Training, seminar, study tours	18	Training, seminar, study tours	19	Training, seminar, study tours	20	Training, seminar, study tours	22
		Study of institutional capacity	3	Improvement in the institutional capacity	4	Improvement in the institutional capacity	5	Improvement in the institutional capacity	6	Improvement in the institutional capacity	7
	Total		7270		7999		8801		9680		10649

Note: The amount shown for the establishment and initial operation of National Housing Bank has been in the corporation part of the programme of business plan, but the preliminary works have to be done by the government level so it is kept in the list of government programme however this has not been included in the total amount.

The separate investment plans of the government, corporation and individual basis necessary during this planning period have been presented in the following tables.

Table 13 Description of programme wise annual investment requirement from the government level

S. No	Major programme	Annual investment requirement Rs.in Lakh																			
		Base year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19
1	Institutional sector housing development																				
a	Land development plan	80	88	97	107	118	130	143	157	173	190	209	230	253	278	306	337	371	408	449	494
b	Model housing plan	25	28	31	34	37	41	45	50	55	61	67	74	81	89	98	108	119	131	144	158
c	Development of small settlement with working policy	50	55	61	67	74	81	89	98	108	119	131	144	158	174	191	210	231	254	279	307
2	Deprived group targeted housing																				
a	Poor oriented community housing	5400	5940	6534	7187	7906	8697	9567	10524	11576	12734	14007	15408	16949	18644	20508	22559	24815	27297	30027	33030
b	Urban poor apartment	1250	1375	1513	1664	1830	2013	2214	2435	2679	2947	3242	3566	3923	4315	4747	5222	5744	6318	6950	7645
c	Squatter housing plan	375	413	454	499	549	604	664	730	803	883	971	1068	1175	1293	1422	1564	1720	1892	2081	2289
d)	Housing for women, weak, old, street children housing	50	55	61	67	74	81	89	98	108	119	131	144	158	174	191	210	231	254	279	307
3	Institutional capacity enhancement																				
a	Legal structure development	5	6	7	8	9	10	11	12	13	14	15	17	19	21	23	25	28	31	34	37

S. No	Major programme	Annual investment requirement Rs.in Lakh																			
		Base year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19
b	Housing technology development	15	17	19	21	23	25	28	31	34	37	41	45	50	55	61	67	74	81	89	98
c	Institutional development plan	20	22	24	26	29	32	35	39	43	47	52	57	63	69	76	84	92	101	111	122
	Total	7270	7999	8801	9680	10649	11714	12885	14174	15592	17151	18866	20753	22829	25112	27623	30386	33425	36767	40443	44487

Table 14 Description of programme wise annual investment requirement from the corporation sector

S. No	Major programme	Annual investment requirement Rs.in Lakh																			
		Base year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19
1	Institutional sector housing development																				
a)		20	22	24	26	29	32	35	39	43	47	52	57	63	69	76	84	92	101	111	122
b)		25	28	31	34	37	41	45	50	55	61	67	74	81	89	98	108	119	131	144	158
c)	Development of small settlement	200	220	242	266	293	322	354	389	428	471	518	570	627	690	759	835	919	1011	1112	1223
2	Deprived group targeted housing																				
a)	Poor oriented community housing	3600	3960	4356	4792	5271	5798	6378	7016	7718	8490	9339	10273	11300	12430	13673	15040	16544	18198	20018	22020
b)	Land bank cooperative	1000	1100	1210	1331	1464	1610	1771	1948	2143	2357	2593	2852	3137	3451	3796	4176	4594	5053	5558	6114

S. No	Major programme	Annual investment requirement Rs.in Lakh																			
		Base year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19
c)	farming plan																				
	Squatter housing plan	125	138	152	167	184	202	222	244	268	295	325	358	394	433	476	524	576	634	697	767
	Low rental housing	2500	2750	3025	3328	3661	4027	4430	4873	5360	5896	6486	7135	7849	8634	9497	10447	11492	12641	13905	15296
e)	Concessional loan management plan	8360	9196	10116	11128	12241	13465	14812	16293	17922	19714	21685	23854	26239	28863	31749	34924	38416	42258	46484	51132
3	Institutional capacity development																				
	a)National Housing Bank establishment and operation	100	110	121	133	146	161	177	195	215	237	261	287	316	348	383	421	463	509	560	616
	b) Development of legal structure	5	6	7	8	9	10	11	12	13	14	15	17	19	21	23	25	28	31	34	37
	c) Institutional improvement plan	20	22	24	26	29	32	35	39	43	47	52	57	63	69	76	84	92	101	111	122
	Total	15955	17552	19308	21239	23364	25700	28270	31098	34208	37629	41393	45534	50088	55097	60606	66668	73335	80668	88734	97607

Table 15 Description of programme wise annual investment requirement from the organized sector

S. No.	Major programme	Annual investment requirement Rs.in Lakh																			
		Base year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19
1	Institutional sector housing development																				
a)	Apartment housing	60000	66000	72600	79860	87846	96631	106294	116923	128615	141477	155625	171188	188307	207138	227852	250637	275701	303271	333598	366958
b)	Community housing	37500	41250	45375	49913	54904	60394	66433	73076	80384	88422	97264	106990	117689	129458	142404	156644	172308	189539	208493	229342
c)	Rental housing	55000	60500	66550	73205	80526	88579	97437	107181	117899	129689	142658	156924	172616	189878	208866	229753	252728	278001	305801	336381
d)	Land management (Plotting)	60000	66000	72600	79860	87846	96631	106294	116923	128615	141477	155625	171188	188307	207138	227852	250637	275701	303271	333598	366958
2	Deprived group targeted housing																				
a)	Percentage system in private housing	5000	5500	6050	6655	7321	8053	8858	9744	10718	11790	12969	14266	15693	17262	18988	20887	22976	25274	27801	30581
Total		217500	239250	263175	289493	318443	350288	385316	423847	466231	512855	564141	620556	682612	750874	825962	908558	999414	1099356	1209291	1330220

Table 16 Description of programme wise annual investment requirement from the private sector

S. No.	Major programme	Annual investment requirement Rs.in Lakh																			
		Base year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19
1	Private sector housing development																				
a)	Private/individual housing	502000	552200	607420	668162	734978	808476	889324	978256	1076082	1183690	1302059	1432265	1575492	1733041	1906345	2096980	2306678	2537346	2791081	3070189
b)	Housing maintenance, improvement, extension	70900	77990	85789	94368	103805	114186	125605	138166	151983	167181	183899	202289	222518	244770	269247	296172	325789	358368	394205	433626
Total		572900	630190	693209	762530	838783	922662	1014929	1116422	1228065	1350871	1485958	1634554	1798010	1977811	2175592	2393152	2632467	2895714	3185286	3503815

D) Financial Instruments for the Implementation of Plans and Programmes

Analysis of investment requirement

The desired level of progress may not be achieved if there is a lack of adequate resources for the effective implementation of plans and programmes regardless of the fact that the plans and programmes are well formulated. Financial resources play an important role in any plans and programmes and it cannot be an exception in the case of the business plan of the housing sector. Undoubtedly, it can be easily assumed that there is a need of huge resources for the implementation of the plans and programmes included in the business plan. For the successful implementation of all the plans and programmes to achieve the goals and objectives, there is a need of total investment of Rs.46 Kharba 60 Arba 9 Crores 61 Lakhs as per the present estimates under the government, corporation, institutional and individual sector in the coming 20 years time period.

Table 17 Investment requirement for the business plan period of 20 years

S.No.	Investors	Investment requirement in the base year (Rs.in Lakh)	Total investment requirement (Rs.in Lakh)	Share %
1	Government	7170	416606	0.89
2	Corporation	15955	914053	1.96
3	Institutional	217500	12457382	26.73
4	Individual	572900	32812920	70.41
	Total	813625	46600961	100.00

Of the total investment requirement, the share of the government is the lowest accounting for only 0.89 per cent while the highest is in the case of individual investment accounting for 70.41 per cent. Similarly, it can be seen from the table above that in the case of corporation and institutional it is 1.96 per cent and 26.73 per cent respectively.

The investment required for different programmes cannot be met only by the efforts of the Government of Nepal alone. It is a well known fact that in the development of the housing sector there is more investment of the other stakeholders and actors than the government. Therefore, for the fulfillment of the investment requirement the active role of different stakeholders, organizations, agencies, individuals and families involved in the development

of the housing sector becomes crucial or very important. As explained in different chapters above, there is a direct or indirect involvement of the corporation, organized sector, individuals and families along with government in the development of the housing in Nepal. Therefore, it is necessary to mobilize effectively the potential sources of investment from different agencies and sector for the successful implementation of the plans and programmes mentioned in the business plan by formulating appropriate policy and instrument.

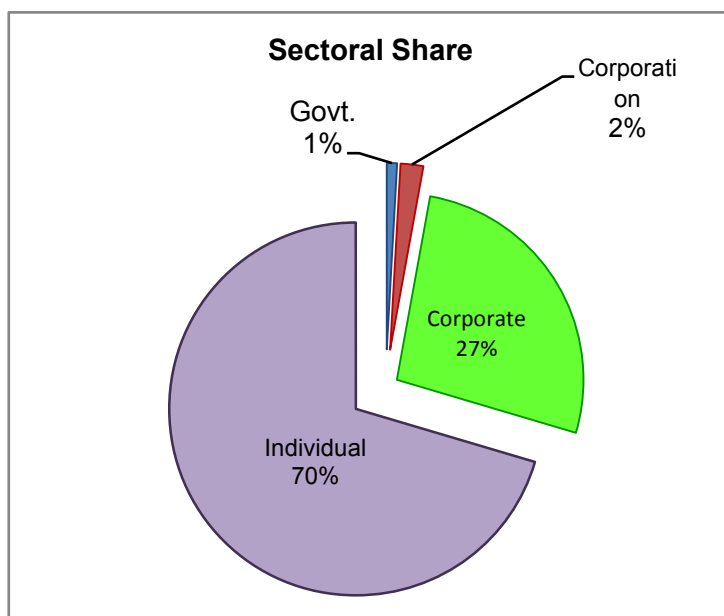


Figure 2 Share of sectoral investment required in 20 years business plan period

For the implementation of the proposed plans and programmes, the government sector needs to invest total Rs.41 Arba 66 Crores for the development of housing in the coming 20 years period and according to present trend of the allocation of budget for this sector in the base year is somewhere around Rs.44 Crores. With 10 percent increment every year in the allocation of budgetary resources from the Ministry of Finance, there will be a total of Rs. 25 Arba during the planning period thereby indicating a deficit of Rs.16 Arba 36 Crores 13 Lakhs (about 39% of the required amount). The possible sources to meet the deficit are explained in detail in the relevant sections below.

The following are the existing sources making investment for the development of housing sector at present:

Government of Nepal

Housing, Urban development and Building sector is still in low level both in terms of priority for development and investment of the government and there is almost no possibility of any dramatic increase or change in the level of investment except general improvement in the coming years. In other words, there are many urgent priority areas for investment from the point of view of poverty alleviation and development and on the contrary the available financial resources are extremely limited therefore the government is not in a position to make substantial investment in this sector even if it desires. The share or the proportion of amount allocated for investment from the government of Nepal in housing, urban development and building sector in different periodic plans are somewhere around 1 per cent of the total investment indicating thereby that this sector is still in low level both in terms of priority for development and investment of the government.

The Site and Services Programme, Guided Land Development Programme and Land Pooling programme which was started slightly later on initiated by the government during the 2030s decade were the major programmes relating to this sector in the urban areas, particularly in the Kathmandu Valley, for the planned housing development where the role and the investment of the government had remained remarkable. Besides this, the improvement of the existing rural housing programme etc. were the important programmes implemented under Basic Housing Needs Programme. The recently started Janata Awas Karyakram (People's Housing programme) implemented for the provision of housing to the poor families in the rural areas is very important in this regard and this programme has not only been continuing for the last three years but the target groups and geographical coverage or areas (districts) is also increasing. The system of providing seed capital in the form of loan through land development revolving fund for land pooling projects can be considered as another important investment by the government in the housing sector. The land pooling programme basically is a type of project which generates the required resources for investment by itself. The government needs to play the role of housing provider for the poor and deprived families as the programmes presently under implementation for the urban poor is not going to address the housing problems particularly of the urban poor of the Kathmandu Valley and other major cities of Nepal. In this context, it is commendable to observe that the shelter policy clearly mentioned the role of government in housing not only as an enabler and facilitator but also housing provider for the low income and homeless class. There is neither provision of subsidy for the construction of housing to

the poor like in Indonesia nor there is provision of loan for the poor to pay the rent in Nepal. In fact, the implementation of the programmes like this can be expected to solve the problems of squatters in a sustainable manner which has remained a big headache to the government. Therefore, it is desirable to think seriously by the government.

The alleviation of poverty has remained a major objective of government in the periodic plans of Nepal including the the Tenth plan and the fact must not be forgotten that the provision of housing can contribute significantly in the direction towards the alleviation of poverty. It can be expected that there will be more allocation of budget in the coming years compared to present level of allocation of budget for the programmes mentioned in the business plan for the housing sector for the alleviation of poverty and to show the presence and role of government as a housing provider in the coming years from the government side.

Individual and families

There is a practice of constructing the houses by the house owners itself (owner self build) by managing the entire manpower and materials in the housing development process of Nepal. In the rural areas the entire houses are built by the individuals/ families and in the urban areas more than 80 per cent of the houses are produced and fulfilled by the efforts of the individuals and families and there is a great possibilities that this process will remain intact even in the coming few years. It is estimated that there has been Rs.10 Arba investment in housing sector by the individuals and families. Besides this, the amount would be still high if the investment for the individuals through banks and financial institutions is considered and it is clear that the role of this sector in the development of housing in future will not only be important but will be the greatest.

Organized private sector

Under the organized private sector the construction of group and apartment housing in the Kathmandu Valley in the last 10 to 12 years were done by the land and housing development companies. There are more than 60 housing companies and developers in the Kathmandu Valley constructing apartments and group housing in various parts of the cities of Kathmandu and Patan and some companies and developers have already completed and distributed their production in the past. In recent years this type of housing construction is becoming very much profitable therefore their number is increasing day by day. But as per the monetary policy of the Nepal Rashtra Bank the ceiling or restriction has been placed whereby banks and financial institutions are not allowed to invest more than 25 per cent of their total investment in housing

and real estate and the experience indicates that this has slowed down the business to some extent. The main target groups or the customers for the housing constructed by this sector so far has been almost high income group residing in Nepal and Non Resident Nepalis. Though there is huge demand of housing from medium and low income groups and poor families but the houses produced by these companies are very far from their access due to excessive prices of these houses. This type of housing development is not possible to address and fulfill the demand of these people. As of 2068 B.S., 123 companies have received approval to implement such housing plans and as per the news published in a local paper and it is estimated that there has been about Rs.1 Kharba rupees being invested only from the banks and financial institutions in this sector.

Banks and financial institutions

There is information that commercial banks have invested Rs.95 Arab and similarly development banks, financial institutions including the cooperatives have also invested Rs.95 Arab totalling Rs.190 Arab in land and housing development. Of this amount, a large share has been invested to housing companies for group and apartment housing construction. In addition to this, the Nepal Housing Development Finance Company has invested Rs.43 crores for the construction of new houses, repair and maintenance of the old houses etc. Similarly, the Provident Fund of Nepal has also invested Rs 70 crores for the construction of houses and other building construction works to the employee associated with the fund.

National and international non governmental organizations

Lumanti is remembered as an NGO involved in the provision of housing facilities to the poor and deprived families in Nepal. Although Lumanti is mostly involved in the issues of squatters rights however it is also active in the provision of housing to the urban poor families by constructing low cost housing.

Similarly, Habitat for Humanity International is involved in more than 88 countries including Nepal. This organization particularly in 2009 has brought the plan to construct 5000 units of houses in Kabhre district as an effort to improve the unplanned settlements.

Shelter and Local Technology Development (SLTD) centre is involved in the important works of research, development and dissemination of low cost technology though in a small scale. It is also involved in the production and sale of low cost housing in limited number. The low cost houses constructed in Birauta, Pokhara by Employees Provident Fund under its technical supervision is the largest in terms of number so far. The centre has also built

some low cost houses in Sitapaila, Satungal in Kathmandu and they have already been sold.

The UN-HABITAT in Nepal is playing important role in the development housing in Nepal. The responsibility to mobilize US Dollar 50 million under Experimental Reimbursable Seeding Capital (ERSO) established to provide concessional housing loan to poor families for the construction of the houses also lies with the UN-HABITAT Nepal. This agency was involved in the relief works through the provision of housing to the victims of Koshi floods in 2009.

Identification and mobilization of possible sources of investment

As mentioned above, it is not possible to meet the required investment for the housing development by the single effort and investment of the government alone to achieve the proposed plans and programmes as mentioned in the business plan. Therefore it is necessary to adopt the strategy to acquire the necessary investment for the coming 20 years from all the sectors by identifying and effectively mobilizing the possible sources from the entire stakeholders. The description of deficit in the investment in the government sector is shown in the figure below based on the trends in the present allocation of budgetary resources and need for the investment.

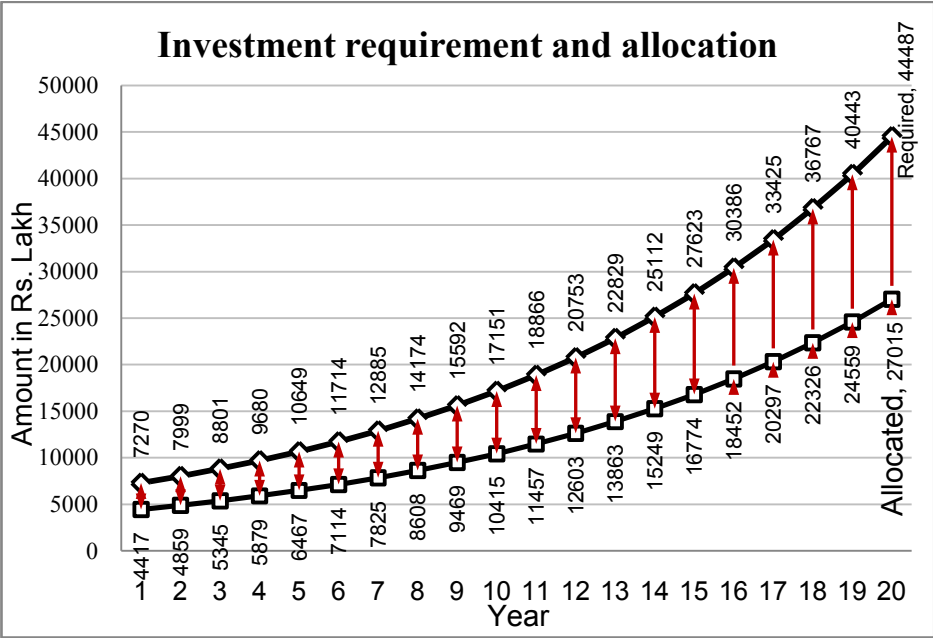


Figure 3 Investment requirement and allocation for 20 years business plan period

For the proposed plans and programmes as per this business plan there will be a deficit of Rs 16 Arba in the government sector and there is the possibility for the mobilization of the investment and financial resources necessary for other sectors from the following measures in the future .

Employees Provident Fund

Employees Provident Fund has invested about 1 percent of its total investment only in building and housing sector and there is immense idle capital with the fund which could be invested in this sector. Therefore the Employees Provident Fund could be one of the important and dependable financial sources for mobilization of investment required for the development of the housing sector. But for this the government of Nepal needs to take the initiative.

The fund is presently investing in housing though in a negligible manner and in this context the fund can make significant contribution towards the provision of housing particularly to its own depositor employees. The fund can provide soft loan of Rs.4.59 Arab for the implementation of housing programme to the government out of a total investment of Rs.16 Arba to be invested by the Government of Nepal in twenty years, (about Rs.8 crores only in the base year and then after with 10 % increment every year).

Bank and financial institutions

As per the Deprived Sector Lending Policy of the Nepal Rastra Bank, the commercial banks, development banks and financial institutions are made compulsorily to make 3 per cent, 2.5 per cent and 2 per cent of their total investment respectively for the economic upliftment of the poor and deprived families. Thus the Nepal Rastra Bank can direct all these financial institutions to make available simple and cheap housing loan to these groups. According to the present system the commercial banks, development banks and financial institutions belongs to category A, B and C class respectively. Nepal Rastra Bank and the concerned agencies of the government of Nepal can also direct the banks and financial institution to provide certain percentage of the profit they make from investment in housing and real estate for the provision of simple and cheap housing loan to poor and deprived groups. There will be the availability of Rs.4.75 Arab (about Rs.8.3 crores only in the base year with 10 % annual increment) for housing in the 20 years time even if the banks and financial institutions allocate just minimum of 2.5 per cent of their present total investment of Rs.190 Arba. For other organized and individuals housing construction the banks and financial institutions can provide housing loans under the regular banking system to the organized private sector and

individulas as per present provision. The banks and financial institutions can facilitate the housing sector by reviewing the present high interest rate charged on housing loanas per the National Shleter Policy by recognizing housing as an industry.

Remittance

The country is receiving substantial amount of money through remittance from the Nepali people working abroad and there is great possibility of mobilizing adequate resources if the governemnt develops an appropriate instrument to channelize certain portion of this money for the develoment of the housing sector. In fact, the substantial part of the money received from remittance is invested in the purchase of land and houses therefore in a way it is invested in housing sector itself. In the Fiscal Year 2068/69BS, the contry received more than Rs 3 Kharba and its annual growth rate is also high. In this context, if the nominal 0.3 per cent of the total money received by the country is used among the welfare activities like the poor oriented housing programme by levying " housing development fee" at the source, it will alone make available or generate Rs 90 crores annually. In 20 years time it will generate Rs.51.55 Arba of the total contribution based on 10 per cent annual increment.

Development Partners

There is also the possibility of significant role which can be played by different international development partners towards making housing facility accessible to the poor and low income families. There is also the possibility to mobilize adequate resources from other international donor countries, agencies and organizations apart from UN-HABITAT for the programmes to increase access of housing to the poor families. In addition to this, there may be a need of dependable technology and improvement in the locally available materials in order to make housing construction safe and economical. To address this issue, adequate studies and continuous research need to be done which can be supported by these agencies. Similarly, the development partners of Nepal can also assist in the institutional capacity development and human resources development activities involved in the housing sector. Minimum assistance of 65.8 crore per year will make available Rs.37.69 Arba for the business plan period of 20 years.

It will be clear from the projected allocation of budget booklet in the coming years about the present investment pattern of the government sector and commitment of the Government of Nepal in the context of investment in housing sector. But the present condition of the corporation is not like this and except the proposed National Housing Bank, among other corporations,

Kathmandu Valley Authority is a recently established organization and National Housing Bank is yet to be established as this has been just proposed in this business plan therefore the present investment capacity of the corporation sector is only 10 per cent of the required quantity, based on the estimated Rs14.4 crores in the base year the quantity of the deficit budget is assessed. The quantity of the deficit budget and the proposed sources to meet the deficit budget mentioned above is shown in the following table:

Table 18 Deficit budget and proposed sources to meet the deficit

Description	Deficit budget in 20years Rs. in crore			Proposed sources	Possible Fund, Rs. in crore
	Gover nment sector	Corpo ration sector	Total		
Require Budget:	4165	9137	13302	Employees Provident Fund	459
Investment projection at present rate	2530	914	3444	Banks and financial institutions	475
				Remittance	5155
				Development partners	3769
Deficit amount:	1635	8223	9858	Total	9858

In the figure of required investment, a total amount of Rs. 48 Billion calculated based on the annual requirement of Rs. 83.6 Crore for the provision of Rs.40 thousands simple loan per family under deprived sector housing through National Housing Bank in the base year is also included with estimated annual increment of 10%. The mobilization of external sources for Rs.48 Billion for all of the 20 years plan period may not be required since the bank will manage some fraction of it by revolving the fund through investment and recovery of loans. However, as the bank will be a newly established corporation, to enable it to provide loan in the initial stage, there will be a need of resources. Therefore, for the initial five years there is a need to make available Rs.1Arba and 22 Crores just for the provision of loan as a revolving fund and then after it will manage the required remaining amount by mobilizing investment of its own fund. So, of the proposed total amount of Rs.98.58 Arab, the investment amount of Rs.46.78 Arab under the corporation part may not be fully required. This amount is not deducted from the total required investment though considering the worst case that the proposed resources may not be available.

3 Business Plan of Urban Development Sector

A) Analysis of existing legal structure/ instruments and policy relating to Urban Development Sector

National Urban Policy 2007

The National Urban Policy of 2007 provides a broad policy framework of the urban development of Nepal. The NUP has set forth 3 main objectives:

- 1) A balanced national urban structure;
- 2) Healthy and economically vibrant urban environment; and
- 3) Effective urban management.

The departmental efforts and investment in urban infrastructure projects have been limited and isolated in many instances, requiring review in its approach. Although the later departmental efforts are systematically being aligned with National Urban Policy of 2007 implementation is still lagging primarily in terms of slow pace of geographical coverage and inadequacy of investment for strategic projects. Most of the resources are scattered in small projects spread across the country and much of which easily falls in the work ambit of the respective local bodies. Therefore the departmental efforts are often being questioned in terms of their validity. Most supporters of devolution put this even as interference on the work area of the local bodies, NGOs and development partners as well as inadequate intuitional capabilities of urban authorities, urban areas are failing to provide desired environment and improve quality of life of people.

Most of the urban areas are growing haphazardly into overcrowded settlement with serious environmental problems and reduced economic efficiency. Despite more than sixty percent of GDP is accrued from the non-agriculture sector (mostly from urban and urbanizing areas), the urban sector still getting only marginal importance lacked government priority and conscious investment for critical urban infrastructures. The government investment for urban development sector indeed lagged throughout the five long decades of the central planned development efforts in the country beginning from the 1950s. This had a major ramification for urban infrastructure development. Until today, the private sector involvement in the development of urban infrastructures is insignificant.

Department of Urban Development and Building Construction has made efforts to refine strategic clarity. Some of the key strategies are;

- Ensuring sufficient and reliable funds for urban infrastructure extension and maintenance.
- Establishment of systematic capacity development process of Urban authorities including municipalities and revitalization of municipality and local self-governance
- Establishment of Ministry Urban Affairs and effective coordination mechanism among the relevant ministries.

Policies and regulations related with Urban Development Sector are:

Town Development Act 1988

Due to the growing population and urbanization, it was essential to provide necessary services and facilities to the residents of the town, construct new towns and maintain health, convenience and economic interest of general public. This was the reason for the formulation of Town Development Act in 1998. This act provides the legal basis for implementing town development plans. This act deals with the formulation and approval of town planning, formulation and approval of local plan, formulation of town development committee and the function, duties and powers of the committee.

Local Self Governance Act 1999

The local self governance act 1999 basically deals with the definition of local governments which included DDC, municipality and VDC. This act has given ample authority to the municipalities for planning, executing and monitoring development projects within their jurisdiction. It elaborated roles and responsibilities of local government along with their authority in various sectors. It also defined the local government especially metropolitan city, sub metropolitan city and municipality. It has empowered the local authority to embark on local development using local as well as regional and natural resources. It has made local governments autonomous bodies.

B) Existing Situation of Urban development sector

The urbanization process in Nepal has recorded an outstanding growth rate in recent decades but it is the least urbanized country in South Asia. As per 2068 census, the urban population accounts for 17% of total population. Urban population is taken to be the population residing in only 58 municipalities. The urbanization rate at 3.37% per year is three times higher than the population growth rate of 1.35%. Municipalities have growth rate higher than the national growth rate. One third of the total urban population is concentrated in the 42 smaller municipalities while the remaining 16 large municipalities accounts for two third urban population. Kathmandu Metropolitan City records for highest

population with 975453 and Dhulikhel with 14283 accounts for lowest population. The total area of the 58 municipalities is 3276.28 sq. km. The urban growth pattern in Nepal in last 50 years can be seen below:

Table 19 *Urban Growth Patterns in Nepal*

Parameters	1961	1971	1981	1991	2001	2011
No of Urban Areas	16	16	23	33	58	58
Urban Population ('000)	336	462	975	1696	3228	4524
Average Population of Municipalities (000)	21	29	42	51	56	78
Urban Population (%)	3.6	4	6.4	9.2	13.9	17
Urban Growth Rate (%)	4.4.	3.23	7.55	5.89	6.65	3.37
National Pop GR (%)	1.65	2.07	2.66	2.1	2.27	1.35

Nepal, urban population accounts for only those populations residing in the 58 municipalities. The population census reports those populations living in designated urban areas as urban and those living in rural area as rural population. Populations of small towns and market centers are not included. For instance, the area covered by the 197 Town Development Committees currently functioning all over the country, as shown in the Annexure 1 of this report, should also be considered as urban areas. Since the national urban hierarchy includes market centers and small towns, the populations of these urban areas also need to be included in the urban population. For example, when initially formed a Town Development Committee, Lamki alone had more than 40000 population.

According to the National Urban Policy, 2007 key issues related to urbanization are unbalanced urban structure, weak rural urban linkages, environmental deterioration, and lack of clarity in the National Policy, Urban Poverty and Weak Municipal Institutions.

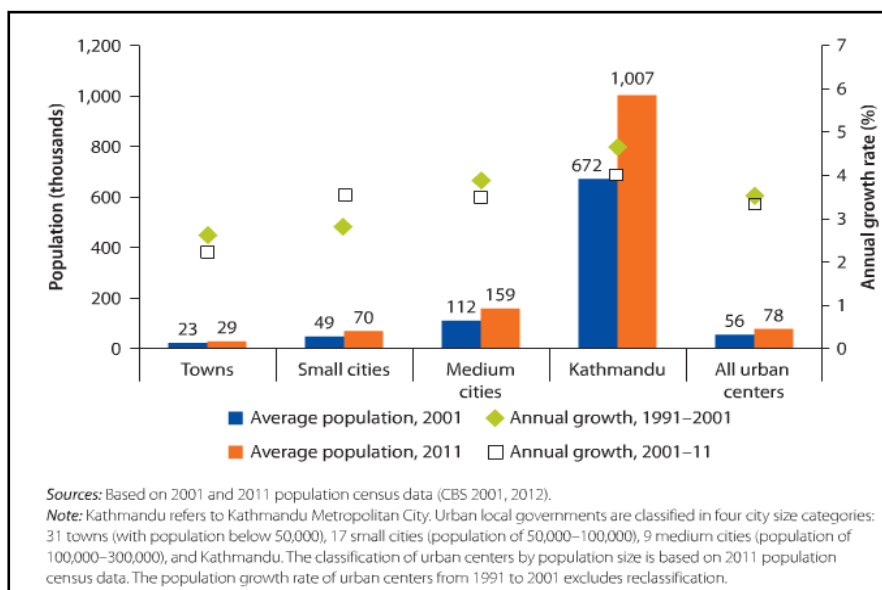


Figure 4 Population & Annual Population Growth of Urban Centre

Table 20 Distributions of urban areas by eco regions

Urban Size Classes by Population	Number of Municipalities			Total
	Terai	Hill	Mountain	
$\geq 100,000$	7	3	0	10
50,000 – 99,999	6	10	0	16
$< 50,000$	17	15	0	32

Map O.1 Development Regions, Corridors, and Urban Centers, 2011 Population

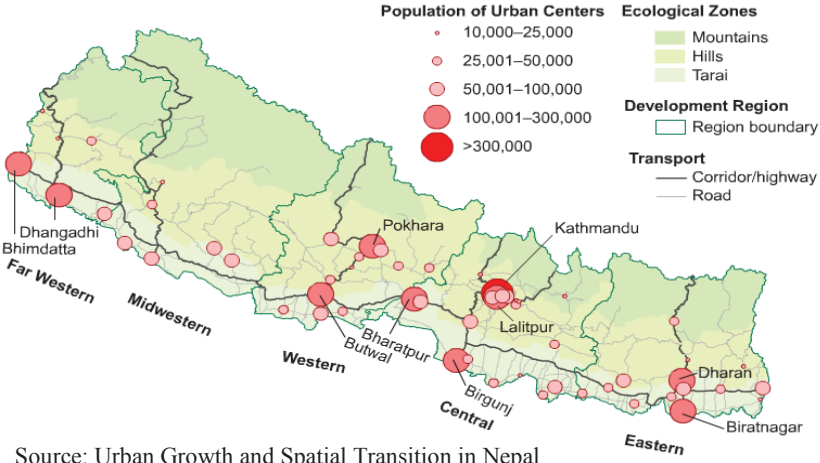


Figure 5 Development Regions, Corridors& Urban Centres

c) Business plan and programme

The Local Self Governance Act 2055 recognizes 58 municipalities as urban areas. Besides these areas there are many administrative areas which have more population density and on the other side, there are some small towns and market centres with urban characters which should be considered as urban areas. The Municipal Area Determination Recommendation Committee Report, MLD, 2059 identified 44 additional areas as urban centres and proposed them to be considered as municipalities. Similarly, Government Budget 2067/068 stated 41 new municipalities but yet not formalised. At present, also government has constituted a committee to declare area as new municipality. Likewise, with the new major roads construction, the new urban centers evolve around the vicinity. Mid hill highway construction has been one of the national priority projects. The department of road has identified about 48 settlements which will see growth due to the construction of road. DUDBC has identified 23 settlements with high potential growth rate along the Mid Hill Highway and has identified ten major areas to be developed as New Towns with population rising to one hundred thousand. According to the current provision of Local Self Governance Act, 2055 (B.S.), clause 72 in relation to declaration of a municipality is a minimum population of 20000 and minimum services like electricity, road, water supply and communication; the urban areas shown in following figure have already qualified and recommended to declare as municipalities:

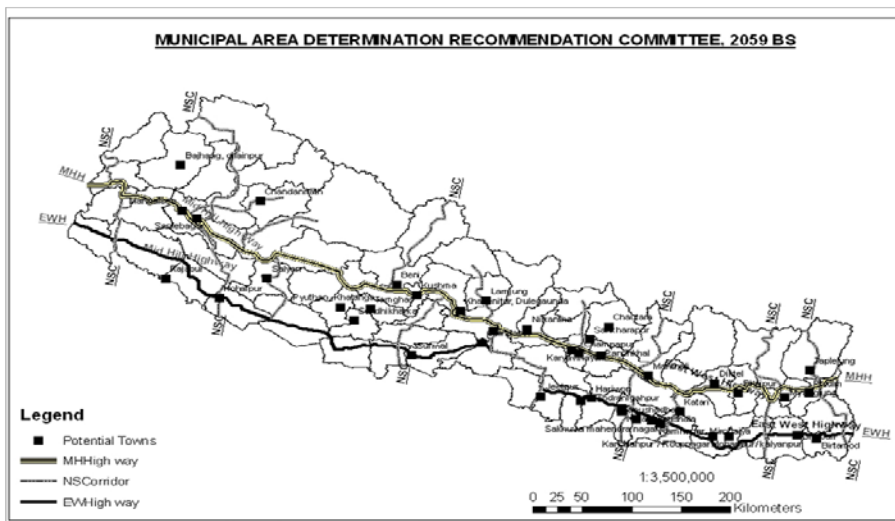


Figure 6Municipal Area Determination Recommendation Committee 2059 Bs

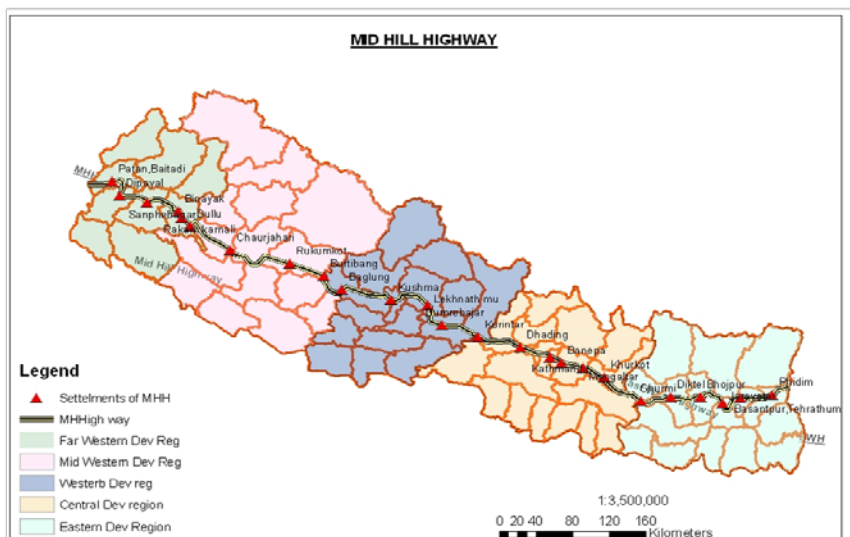


Figure 7 Mid Hill Highway

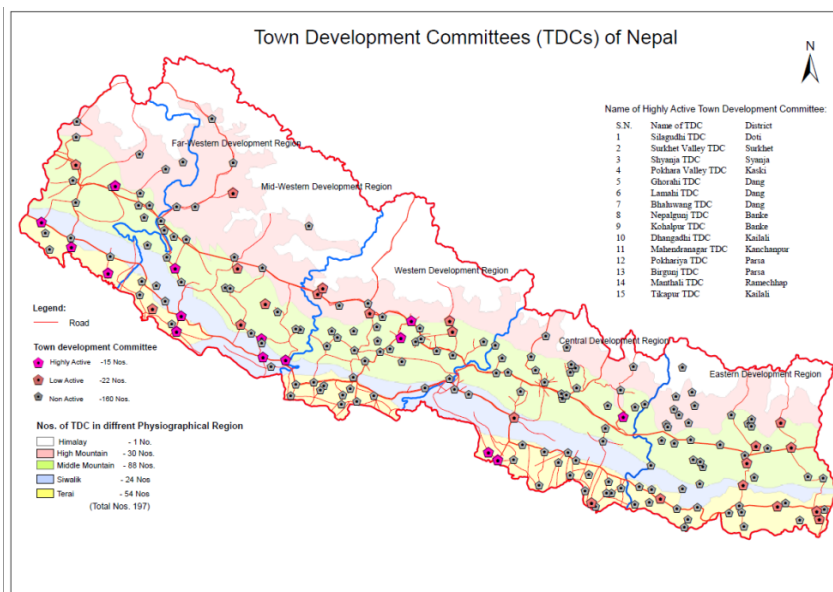


Figure 8 Town Development Committees of Nepal

There are many municipal areas which are very rural in nature so the provision of urban infrastructures and facilities is not possible. Take for an example 205 Sq. Km Kamalamai Municipality has two small areas 25 km apart and rest is rural., while Birtamod VDC and many VDCs of Kathmandu Valley are much more urban than most of the municipalities. On top of these, many new areas are urbanizing which demands the redefining of urban areas and classify their hierarchies which would ultimately help in picturing the present urban structure vis-a-vis visualize future areas with high urban growth potential and possible urban structure. The criteria need to be developed for identifying urban centres and classifying them to classes/ hierarchies accordingly. So, an analysis has been done taking 58 municipalities, 14 small towns and 4 market centers (samples) and marking them accordingly to the criteria's on basis of population, population density, growth rate, location advantage, balancing preference, number of shops and road junction (provision of motorable roads).

Classification Criteria

1. Population: 25 marks
2. Population Density: 25 marks
3. Growth Rate: 15 marks
4. Location Advantage: 15 marks
5. Balancing Preference: 10 marks
6. No of shops: 5 marks
7. Road Junction (Provision of motorable roads): 5 marks

Total: 100 marks

Marking Criteria

Population (25 marks)

- Upto 5000, 1 mark per 1000
- Additional 15000, 1mark per 3000
- Additional 50,000, 1mark per 10,000
- Additional 100,000, 1mark per 20,000
- Additional 200,000, 1mark per 40,000

Population Density in person per hectare (25 marks)

- Upto 5, 1 marks per 1
- Additional 15, 1mark per 3
- Additional 25, 1mark per 5
- Additional 35, 1mark per 7
- Additional 50, 1mark per 10

Population Growth Rate (15 marks)

1 mark per half percentage of growth.

Location Advantage (15 marks)

If the area touches the following roads:

- East West Highway : 8
- Mid Hill Highway: 5
- Hulaki Road: 2
- Major North South Corridor (connecting to both India and China): 3
- NS Corridor(connecting to either of India or China or more than two district Headquarters): 2
- Any Motorable Road Corridor: 1, If the area boundary in is within 2 km from the above roads, half of above marks be given.
- District HQ: 2

Balancing Preference (10 marks)**Development Region (6)**

- Far Western Region: 6
- Mid Western Region: 4
- Western Region: 2
- Eastern Region: 2
- Central Region: 1

Eco Zone (4)

- Himal : 4
- Mountain (Except Kathmandu Valley) : 2
- Terai/ Kathmandu Valley : 1

Number of shops – 100m from the center (5 marks)

- 1- 5: 1
- 6-10 : 2
- 11 – 20: 3
- 21-40: 4
- ≥ 40 : 5

Number roads radiating from the area (5 marks)

- 3 roads / trials : 3
- If at least one of above is motorable: 4 OR,
- 4 or more roads: 4
- If at least one of above 1 road is motorable: 5

Road Junction/ Provision of motorable road (5 marks)

- 2 thorough motorable road: 5
- 1 thorough motorable road and 1 motorable road: 4
- 1 thorough motorable road

Basic Principles Adopted in Proposed Programs for the Business Plan Period

- a) Meeting minimum infrastructure requirements of urban centres on incremental basis:

New hierarchy of the urban areas like metro city, sub-metro city, city, Sub-city and Market centres will be set in accordance to the recommended criteria and minimum level of physical, social and economic infrastructure as designated to each hierarchy will be met by the end of this plan period. This will guide and streamline the investment in the urban development sector rationally.

- b) Implementation of Important Strategic Programs for development of urban areas and facilities

Rapid and unplanned growth in most of the urban areas with inadequate minimum infrastructure and services due to migration in search of facilities to urban centres is the major characteristics of urbanization in Nepal. Therefore, formulation of comprehensive strategic mega programs is inevitable to make urban system more effective, to guide such haphazard growth and to provide basic infrastructure so that more than one urban area will be benefited. This is a major challenge for the GON though its efforts are in place towards planned urbanization in the country by guiding and promoting future expansion of urban areas through identification and implementation of strategic programs.

To meet this objective, Infrastructure development program which can cover more than one urban area, especially urban road projects should be guided strategically. Similarly, demand for mega projects like integrated drainage system, stadium, amusement park are increasing which require massive investment on the part of the government. Undoubtedly, demand of such mega and multi-year infrastructure development projects will continue in future as well.

The urban development sector of the Department of Urban Development and Building Construction should concentrate in following strategic activities:

- Small town, market centre and compact settlement programs in proximity of major High ways – 10 modern cities having at least a population of 100,000 is proposed to develop along the mid-hill

highway. The identification of potential site for urban development will be based on 9 different indicators like Availability of land, Source of drinking water, potential of economic development, current location of the settlement, population, condition of migration, non-agricultural activities, literacy and availability of electricity etc. Efforts will be made to achieve balanced national urban structure based on the concept of regional development as envisaged by the National Urban Policy

- Technical support to formulation and implementation of urban plans – Programs related to achieve minimum level of infrastructure as discussed earlier in this chapter will be implemented
- Strategic plans, programs and policy based guidelines will be formulated, implemented and reviewed.
- Policy related guideline on environment will be formulated.

Minimum Standard of infrastructure and Services

The following minimum infrastructure service standard has been proposed by incorporating ideas and suggestions given by the participants during the workshop, infrastructure service level indicators of National Planning Commission study, existing realities of the urban areas in Nepal, investment capacity of government of Nepal and pace of development for the provision of such services etc. in Nepal. The minimum basic facilities such as drinking water, sanitation facility, and access to basic education, basic health facilities and electricity for all levels of urban areas have been proposed though in varying degrees, quantities, coverage etc. This minimum quantities, coverage etc. proposed could be scaled up incrementally or gradually to achieve optimum or desired service standard in future. In addition to this, under the heading of minimum infrastructure service standard, the minimum facilities of communication, security etc. has also been proposed.

Table 21 Minimum Physical Infrastructure for Various level of Urban Sector

S.N.	Physical	Description	Metro City	Sub City	Metro City	City	Sub City	Market Centers
1.	Road	Percentage of household within a distance of motorable road	More than 95 % of houses are with motorable road	More than 90% of household are within 0.5 km from motorable road	More than 90% of household are within 1km from motorable road	More than 90% of houses are within 2km from motorable road	More than 90% of houses are within 2km from motorable road	
2.	Water supply	Piped water fed to the system in ltrs/c/d	100	100	80	60	45	
	Water Accessibility	Distance from home to the piped water tap in minutes	95 % Household have pipe connection	More than 85 % Household have pipe Connection	More than 80% Household pipe W/S within 20 M	More than 80 % have pipe water within 50 M	Piped water system	
3.	Sanitation facilities	Percentage of households covered by waste treatment system	≥90%	85%	60 %	40 %	-	

S.N.	Physical	Description	Metro City	Sub City	Metro City	Sub City	Market Centers
4.	Solid waste management	Percentage of households covered by SWM service	90 %	80 %	70 %	60%	-
	Implementation of Sanitary land fill site(SLS)		Land acquired/developed	Land identified/ acquired/ developed	Land identified/ /	SWM Area with collection and recycling facility	On Site Collection
5.	Electricity	Electricity Supply System	99%	95%	95%	95%	95%
6.	Tele-communication						

Table 22 Minimum Social Infrastructure for Various level of Urban Sector

S.No.	Social	Description	Metro City	Sub Metro City	City	Sub City	Market Centers
1.	Health: Access to basic health care facility	Hospital/Health centre/health post etc.	District Hospital Zonal Hospital Regional Hospital (Above 500 beds)	District Hospital (25-50 beds) Zonal Hospital (50-100 beds)	Primary Health Care Center (5-15 beds) District Hospital	Health Center Care	Health Post
2.	Education	Primary/ basic level: 90 sq ft per student, school at a distance of 0.4 – 0.8 km Higher Secondary: 80 sq per student, at a distance of 30min in public transportation Graduate/ Post Graduate: 70 sq ft per person at a	Primary/ basic level Higher Secondary Graduate/ Post Graduate	Primary/ basic level Higher Secondary Graduate/ Graduate	Primary/ basic level Higher Secondary Graduate	Primary/ basic level Higher Secondary Graduate	Primary/ basic level 1 per market centre

S.No.	Social	Description	Metro City	Sub Metro City	City	Sub City	Market Centers
		distance of 45min in public transportation					
3.	Security	Police Post Police Station Police Headquarter	Police Headquarter	Police Post Police Station	Police Post Police Station	Police Post	Police Post
4.	Fire Stations	Fire Engine Fire Station	Fire Station	Fire Station	Fire Station	1 fire engine	1 fire engine
5.	Open Space (Public) also usable during disaster	Neighborhood Park, Local Park, Community Park, Parade Ground	Neighborhood Park, Local Park, Community Park, District Regional Park	Neighborhood Local Community Park, Community Park	Neighborhood Local Community Park, Parade Ground	Neighborhood Local park, park	Neighborhood Park

Table 23 Minimum Economical Infrastructure for Various level of Urban Sector

S.N o.	Economic	Description	Metro City	Sub City	Metro City	City	Sub City	Market Centers
1.	Market	Vegetable Meat Wholesale Retail	Wholesale, retail and slaughter house Number depends on the population	Wholesale, retail slaughter house Number depends on the population	Wholesale, retail slaughter house Number depends on the population	Vegetable/ meat market with cold storage facility	Haatbazaar (vegetable/ meat market with cold storage facility)	
2	Hall	Convention Hall, City Hall, Multipurpose Hall, Community Hall	Convention Hall	Convention Hall	City Hall (Multipurpose)	Multipurpose Hall	Community Hall	
3	Sports Complex	National level, Regional level, City level	National level specialized complexes	Regional level	City level, District Sports Centre	-	-	
4	Transportation System	Intra City and Inter City Bus Terminal	Intra City and Inter City Bus Terminal	Intra City and Inter City Bus Terminal	Intra City and Inter City Bus Terminal	Inter City Bus Terminal	-	

S.N o.	Economic	Description	Metro City	Sub City	Metro City	City	Sub City	Market Centers
5	Public Parking space	Public Parking (2/3/4 Wheeler)	Public Parking (2/3/4 Wheeler) including provision of vertical parking	Public Parking (2/3/4 Wheeler) including provision of vertical parking	Parking (2/3/4 Wheeler) of Taxi Park	Bus Park / Truck Park (2/3/4 Wheeler)	Bus Park / Truck Park (2/3/4 Wheeler)	

Proposed Strategic Plans

The following plans and programmes is expected to achieve comparative advantage and competitive benefits among different sectors of Nepal, strengthen existing rural urban linkages, development of potential North-South corridors, environment friendly infrastructure and services including enhancement of inter-dependency between the proposed new towns along mid-hill high way, realization of the objectives of National Urban Policy such as balanced national urban structure, development of potential new economic centres and upgrading of existing economic centres; enhancement of the trade, commerce and industrialization and tourism development in the potential areas.

Table 24 Proposed programs to develop within 20 years

SN	Proposed Program	Description	Remarks
1	Preparation for establishment of Cities along the mid-hill highway	<ul style="list-style-type: none"> ➤ Patan, Sanphebagar, Rakam Karnali, Chaurjahari, Burtibang, Dumre, Baireni Galchhi, Khurkot, Basantapur, Phidim ➤ Dipayal, Binayak, Dullu, Rukumkot, Kushma, Kurintar, Nepalthok, Ghurmi, Diktal, Jarayotar 	
2	Establishment of satellite cities around proposed Nijgadh and Pokhara airport influencing area	<ul style="list-style-type: none"> ➤ Satellite cities each of 1,00,000 population ➤ Nirmal Pokharai, Bharat Pokhari, Hemja, Rupakot 	
3	Developing infrastructures related to the identity of the cities	<ul style="list-style-type: none"> ➤ Touristic City : Lamki, Budar, Martadi, Guleria, Salyan Khalanga, Pyuthan, Jiri, Gaidakot, Panchathar, Bhimeshwar, Jaleshwar, Uralabari, Pokhara, Tumlingtar, Chisapani, Dunai, Panchkhal ➤ Cultural and Historical City: Tilaurakot, Ramgram, Kapilbastu, Gorkha, Janakpur, Dhanusa, Panauti ➤ Eco City : Ilam, Dharan, Lekhnath ➤ Commercial City: Krishnagar, Kanchanpur, Hanumannagar, Rangeli, Chainpur, Musikot, Bhajani, Baitadi, Jogbura, Tamghas, Manthali, Barabise, Chautara 	

SN	Proposed Program	Description	Remarks
		<p>➤ Commercial and Industrial City: Chandrauta, Rajapur</p> <p>➤ Khajura (agriculture), Sandhikharka</p>	
4	Towns to be developed adjoining China and India border	<p>➤ Dharchula/Hilsa</p> <p>➤ Khasha/Tatopani</p> <p>➤ Rasuwagadhi (kyerung) Taklakot</p> <p>➤ Lomanthang</p> <p>➤ Kimanthanka</p> <p>➤ Tinkar Bhanjyang</p> <p>➤ Dhap</p> <p>➤ Gaddachowki</p>	
5	Proposed Strategic Corridors	<p>➤ Panchkhal-Dhulikhel- Banepa- Panauti</p> <p>➤ Duhawi-Inaruwa-Itahari-Dharan</p> <p>➤ Birgunj-Jitpur-Simara-Pathalaya</p> <p>➤ Pokhara-Lekhnath-Dulagauda</p> <p>➤ Kapilbastu-Lumbini-Siddharthanagar-Butwal</p> <p>➤ Surkhet-Dashrathpur-Chinchu</p> <p>➤ Nepalgunj-Kohlapur</p> <p>➤ Attariya-Dhangadhi</p> <p>➤ Patan-Khodpe-Dadeldhura</p> <p>➤ Taulihawa- Gorusinge- Arghakhachi - Sandhi</p>	

SN	Proposed Program	Description	Remarks
		Kharka ➤ Hetauda - Phaparbari	
6	Proposed regional bus park along MHH Highway	➤ Dadeldhura ➤ Sanfebagar ➤ Chaurjhari ➤ Baglung ➤ Pokhara ➤ Dumrebhansar ➤ Baireni Galchhi ➤ Khurkot	
7	Proposed sub regional bus parks along E-W Highway	➤ Mahendranagar ➤ Attariya ➤ Kohalpur ➤ Gorusinge/Bhalubang ➤ Naranghat/Butwal ➤ Hetauda ➤ Chandranigahpur ➤ Bardibas ➤ Lahan ➤ Itahari ➤ Charal /Birtamod	

The strategic plans have been proposed altogether for twenty years in three phases, five years in the first phase, another five years in the second and ten years in the third phase. The estimated required investment has been presented in the following tables.

Table 25 Strategic mega projects for next 0-5 years

SN	Major Programs	Location	Cost in Crore NRs.
1	Preparation for establishment of cities along the mid-hill highway	Patan, Sanphebagar, Rakam Karnali, Chaurjahari, Burtibang, Dumre, Baireni Galchhi, Khurkot, Basantapur, Phidim	73
2	Establishment of satellite cities around Nijhgadh & Pokhara airport influencing area	Nirmal Pokharai, Bharat Pokhari, Hemja, Rupakot	80
3	Developing infrastructures related to the identity of the cities	<ul style="list-style-type: none"> ➤ Touristic City Jiri, Gaidakot, Jaleshwar, Pokhara, ➤ Cultural and Historical City: Tilaurakot, Ramgram, Kapilbastu., Panauti ➤ Eco City : Ilam, ➤ Commercial City: Krishnagar, Rangeli, Barabise, ➤ Commercial and Industrial City: Chandrata, 	<div style="text-align: center;">40</div> <div style="text-align: center;">40</div> <div style="text-align: center;">10</div>

SN	Major Programs	Location	Cost in Crore NRs.
			30
4	Towns to be developed adjoining China and India border	Taktakot Rasuwa gadhi Kimanthanka	10
5	Proposed strategic corridors	<ul style="list-style-type: none"> • Panchkhal-Dhulikhel- Banepa- Panauti • Duhawi-Inaruwa-Itahari-Dharan • Birgunj-Jitpur-Simara-Pathalaya • Pokhara-Lekhnath-Dulagauda • Kapilbastu-Lumbini-Siddharthanagar-Butwal • Surkhet-Dashrathpur-Chinchu • Nepalgunj-Kohlapur • Attariya-Dhangadhi • Patan-Khodpe-Dadeldhura • Jajarkot – Chaurjahari – Devsthal • Phikej-Illam-Phidim 	250
6	Proposed regional bus parks along Mid Hill Highway	1. Chaurjahari 2. Khurkot	3

SN	Major Programs	Location	Cost in Crore NRs.
7	Proposed sub regional bus parks along E-W Highway	1. Kohalpur 2. Bardibas	3
		Total Estimate	539

Table 26 Strategic mega projects for next 5-10 years

	Major Programs	Location	Cost in Crore NRs.
1	Preparation for establishment of cities along the mid-hill highway	Patan, Sanphebagar, Rakam Karnali, Chaurjahari, Burtibang, Dumre, Baireni Galchhi, Khurkot, Basantapur, Phidim	1667
2	Establishment of satellite cities around Pokhara & Nijgadh I airport influencing area	Nirmal Pokharai, Bharat Pokhari Hemja and Rupakot 2 satellite cities of 1,00,000 population	140
3	Towns to be developed adjoining China & India border	Taklakot Rasuwagadhi Kimanthanka Darchula/Hilsa, Khasa/ Tatopani, Lomanthang, Tinkar Bhanjyang	270 40
4	Developing infrastructures related to the identity of the cities	<ul style="list-style-type: none"> ➤ Touristic City Jiri, Gaidakot, , Jaleshwar, Pokhara, Jaleshwar, Lamki, Panchkhal, Tumlingtar ➤ Cultural and Historical City: Tilaurakot, Ramgram, Kapilbastu, Gorkha, Janakpur ➤ Eco City : Ilam, Lekhnath ➤ Commercial City: Krishnagar, Rangeli, Barabise, Chainpur, Kanchanpur, Musikot ➤ Commercial and Industrial City: Chandrauta, Rajapur 	110 80 30 90 30

	Major Programs	Location	Cost in Crore NRs.
5	proposed Strategic Corridors	<ul style="list-style-type: none"> • Patan-Khodpe-Dadeldhura • Hilsa- Simikot • Manthali – Dhulikhel • Kalesti-Damauli-Dumre-Besissahar • Mahendranagar – Attariya • Jaleswor-Janakpur-Bardibas 	152
6	Proposed regional bus parks along Mid Hill Highway	1. Dadeldhura 2. Baireni Galchhi	3
7	Proposed sub regional bus parks along E-W Highway	1. Attariya 2. Narayanghat/ Butwal	3

Table 27 Strategic mega projects for next 10-20 years

	Major Programs	Location	Cost in Crore NRs.
1	Preparation for establishment of cities along the mid-hill highway	Patan, Sanphebagar, Rakam Karnali, Chaurjahari, Burtibang, Dumre, Baireni Galchhi, Khurkot, Basantapur, Phidim Dipayal, Binayak, Dullu, Rukumkot, Kushma, Kurintar, Nepalthok, Ghurmi, Diktel, Jarayotar	1668 2370
2	Establishment of satellite cities around Nijgadh and Pokhara airport influencing area	satellite cities of 1,00,000 population Hemja and Rupakot	660 120
3	Towns to be developed adjoining China and India border of Nepal	Darchula/Hilsa, Khasa/ Tatopani, Lomanthang, Tinkar Bhanjyang Dhap, Gaddachowki	540
4	Developing infrastructures related to the identity of the cities	Touristic City Lamki, Panchkhal, Tumlingtar Martadi, Budar, Guleria, Salyan Khalanga, Pyuthan, Panchthar, Bhimeshwar, Umlabari, Chisapani, Dunai Cultural and Historical City: Gorkha, Janakpur Dhanusa, Panauti Eco City : Lekhnath Dharan	170 60 30

	Major Programs	Location	Cost in Crore NRs.
		Commercial City: Chainpur, Kanchanpur, Musikot Hanumannagar, Bhajani, Baitadi, Jogbura, Tamghas, Manthali, Chautara Commercial and Industrial City: Rajapur, Khajura, Sandhikharka	100 40
5	Proposed strategic corridors	1. Baglung – Kushma - Mirmi 2. Galchi – Trishuli - Betrawoti 3. Taulihawa – Gorusinge – Arghakhachi - Sanshikharka 4. Hetauda - Phaparbari 5. Uurlabari – Damak - Birtamod	127
6	Proposed regional bus parks along Mid Hill Highway	1. Sanfebagar 2. Baglung 3. Pokhara 4. Dumre Bhansar	6
7	Proposed sub regional bus parks along E-W Highway	1. Mahendranagar 2. Gorusinge/ Bhalubang 3. Hetauda 4. Chandranigahpur 5. Lahan, 6. Itahari, 7. Charal/ Birtamod	11

d) Financial instrument for the implementation of the plans and programmes:

The study of the trends in the budgetary allocation shows that there is no uniformity in the existing allocation of budget in the urban development sector. As per the following table in the last five years, there was the highest allocation of budget in the fiscal year 2068/69 and lowest in the fiscal year 2066/67 therefore the average budget figure of the five fiscal years has been taken with annual 10 per cent increment for the projection purpose for the coming 20 years to make the projection as realistic as possible. Similarly, the investment amount has also been estimated with annual 10 per cent increment to offset the devaluation. Based on these estimates, there is no need of significant additional amount in the next 20 years however, there is a need of Rs.3300 crores additional amount in the second phase of five years. For the rest of the years the existing allocation of the budget is expected to be adequate.

Table 28 Trend in Budget allocation in Urban Development Sector

	2066/67	2067/68	2068/69	2069/70	2070/71
Study of Urban sector Development and Market centre	137786	142590	853610	0	0
Small Town Development	54330	63597	382280	229230	61114
Integrated Action Plan	18500	18418	35953	37416	36363
Special Physical and Infrastructure Development	48084	59467	480187	14682	140163
Intensive Urban Development	365074	331962	2482748	2231640	450934
Urban and Environment Development/Secondary Town Urban and Environment development	807475	748971			2016314
Outer Ring Road	67152	19508	0		0
Biratnagar Ringroad	24517	25334	220200	159229	72551
Model Integrated Settlement Development	493000	607158	1656457	2037682	140005
Urban Governance Improvement					380632
Integrated Urban Development Project					229266
	2015918	2017005	6111435	4709879	3527342

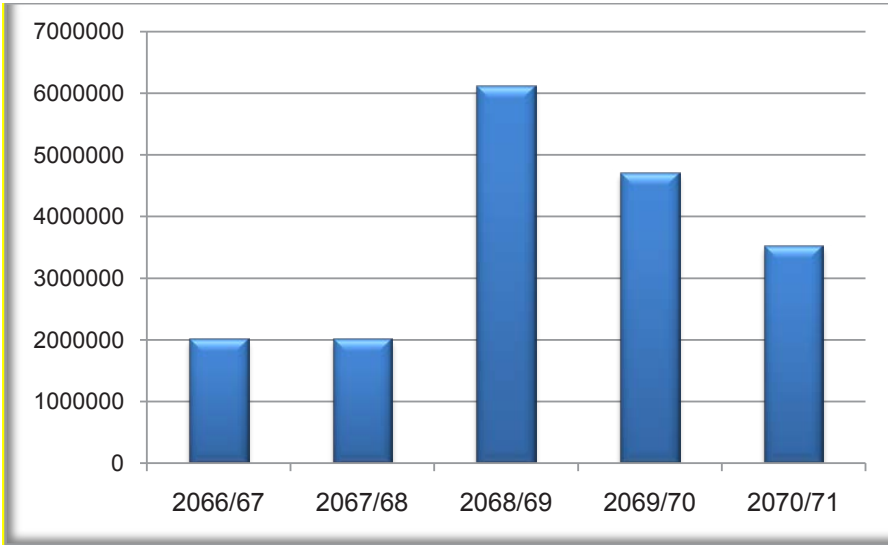


Figure 9 Comparison of Yearly Budget

Table 29 Comparative Table for Required Investment and Allocated Budget

	Base Year	Yea r 2	Yea r 3	Yea r 4	Yea r 5	Yea r 6	Yea r 7	Yea r 8	Yea r 9	Yea r 10	Yea r 11	Yea r 12	Yea r 13	Yea r 14	Yea r 15	Yea r 16	Yea r 17	Yea r 18	Yea r 19	Yea r 20	Tot al
Allocatio n	36763	40439	44483	48932	53825	59207	65128	71641	78805	86685	95354	104889	115378	126916	139607	153568	168925	185817	204399	224839	2105601
Required Investme nt	33480	36828	40511	44562	49018	64780	71258	78383	86222	94844	77842	85627	94191	103610	113971	125368	137905	151696	166865	183552	1840512
Differen ce	-3283	-3611	-3972	-4370	-4807	5573	6130	6743	7417	8158.5	-17511	-19262	-21187	-23306	-25636	-28200	-31020	-34122	-37535	-41287	-265089

Table 30 Program wise Description of Required Yearly Investment

S.No	Main Program	Required Yearly Investment in Lakh																				
		Base Year	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
1	Minimum Infrastructure Development																					
	Physical Infrastructure	19200	21120	23232	25555	28111	5154	5669	6236	6859	7545	8300	9130	10043	11047	12152	13367	14704	16174	17792	19571	
	Social Infrastructure	400	440	484	532	586	644	709	779	857	943	1037	1141	1255	1381	1519	1671	1838	2022	2224	2446	
	Economic Infrastructure	2400	2640	2904	3194	3514	3865	4252	4677	5145	5659	6225	6847	7532	8285	9114	10025	11028	12131	13344	14678	
2	Strategic Programme																					
	Establishment of New Town in Mid Hill Highway	1460	1606	1767	1943	2138	33340	36674	40341	44375	48813	40380	44418	48860	53746	59121	65033	71536	78690	86559	95215	
	Establishment of satellite cities around Nijgadh and Pokhara airport influencing area	1600	1760	1936	2130	2343	5400	5940	6534	7187	7906	7800	8580	9438	10382	11420	12562	13818	15200	16720	18392	
	Towns to be developed adjoining China and India border of Nepal	600	660	726	799	878	6200	6820	7502	8252	9077	5400	5940	6534	7187	7906	8697	9567	10524	11576	12734	

S.No	Main Program	Required Yearly Investment in Lakh																			
		Base Year	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
	Developing infrastructures related to the identity of the cities	2600	2860	3146	3461	3807	6800	7480	8228	9051	9956	7000	7700	8470	9317	10249	11274	12401	13641	15005	16506
	Proposed strategic corridors	5000	5500	6050	6655	7321	3040	3344	3678	4046	4451	1270	1397	1537	1691	1860	2046	2251	2476	2724	2996
	Proposed regional bus parks along Mid Hill Highway	120	132	145	160	176	176	194	213	234	257	170	187	206	227	250	275	303	333	366	403
3	Institutional Development																				
	Human Resource Development;	50	55	61	67	73	81	89	98	108	119	131	144	158	174	191	210	231	254	279	307
	Institutional Development	20	22	24	27	29	32	35	39	43	47	52	57	63	69	76	84	92	101	111	122
	Monitoring	30	33	36	40	44	48	53	58	64	70	77	85	94	103	113	124	136	150	165	182
	Total	33480	36828	40511	44562	49018	64780	71258	78383	86222	94844	77842	85627	94191	103610	113971	125368	137905	151696	166865	183552

4. Business Plan of the Building Sector

A) Analysis of existing legal instruments and policy relating to building

There are different legal and policy documents which are either already in implementation or in the formulation process of draft stage for implementation in near future with an objective to manage and regulate the construction and maintenance works of the buildings. Of those, some major legal documents relating to building sector already under implementation is explained in the following sections below.

National Building Policy, 2069 (Draft):

The National Building Policy, (Draft) prepared in 2069 BS for building sector is in the process of approval. This draft document is primarily prepared with an objective to construct safe, durable, comfortable and cost effective public and private buildings using local construction materials and technology as far as possible. This draft policy has divided the entire buildings into 16 categories based on the use. The objective of this draft policy is to make safe and quality buildings according to National Building Code. Attempts have been made to identify and effectively mobilize the financial instruments in order to make necessary investment in the building sector by this policy. It emphasizes the need to formulate the policy for the maintenance of the building standard and bye laws for different buildings.

Building Act, 2055:

The pervasiveness of building act implemented in 2055 BS covers all municipalities and village development committees of the country. It has categorized all the building into four types from the structural point of view as per the building code. Major thrust in this act is given to construct safe building by wider application of the building code therefore implementation instrument relating to that and provisions for punishment for not complying to building code are mentioned in the act.

Apartment Act, 2054:

The Apartment Act implemented in 2054 BS paved the way for the private sector to involve in the development of housing in an organized way. The broad subjects like the right of ownership of the apartment, operation and

management of such buildings, users rights of the housing units, responsibilities of the buyers, responsibilities of the developers etc. are included in the act. The act has made mandatory provision to form users committee for the smooth operation and maintenance of the apartment and the complex.

Building Regulation, 2066:

It is necessary to pay certain amount of money by every individual including government, semi government offices for getting building permit from concerned office. There is also provision in the regulation to issue the building permit within 30 days by the concerned municipalities provided that application fulfils all the requirements mentioned in it. There is a provision various process for approving different categorized buildings as per national building code. Along with application form there are four types of technical forms to be filled and signed by the engineer or an architect along with affidavit paper attached in the annex.

National Building Code:

The building code has really taken the strong footing and dynamism only after the destruction resulted from the earthquake of 2045BS though the efforts had been made in the past towards the formulation of the building code to make building construction works safe and organized in Nepal. The plan for the preparation of the National Building Code was started by the then Building Department under the financial assistance of the UNDP/UNCHS following the request made by then Ministry of Physical Planning and Works to UNDP. Building code was prepared within two years period from 1992-94.

The building code could not be implemented immediately during that period due to the various reasons such as lack of institutional base to test the strength of the building, predominance of local materials and technology, ignorance about the measures to minimize the risks from the potential earthquakes among the policy makers as well as common people, low economic level, inadequate legal provision for the improvement of the earthquake safety etc. Basically this code is divided into the following four categories:

Table 31 Categories of the Building Code

Level	Type of code	Context and use
1	State of art Design	<ul style="list-style-type: none"> – Encouragement to ultra modern technology and equipments in design and construction – Free use of ultra modern technology and principle
2	Professionally engineered buildings	<ul style="list-style-type: none"> – Professional designers – Design according to designated standard
3	Mandatory rule of thumbs	<ul style="list-style-type: none"> – Medium level technical subject matter – Readymade designs and detail plans to be used by engineers, technicians, builders and house owners – Appropriate for all owner builder buildings can be used up to three storeys buildings
4	Guidelines for Remote Rural Buildings	<ul style="list-style-type: none"> – Construction works using only traditional materials and technology without involvement of the technicians (mud, stone, wood, adobe brick etc)

In spite of the several difficulties, the notice to implement this National Building Code in all municipalities and in particular designated VDCs within the Kathmandu Valley has already been published in Nepal Gazette supported by the legal provision made in the Building Act, 2045BS. However, the code has not been implemented as mandatory in practical terms as per the spirit in all the municipalities of Nepal. There is still a prevalence of confusion even among many professionals that building code and building bye law is the same. Due to this confusion, the building permit is issued in many municipalities without compliance to the provision of the building code. The inability to disseminate this concept of National Building Code is for our own safety among the common people from the point of view of earthquake risks could not be checked or controlled in an institutional manner.

Bye laws related to Building Construction

Besides the National Building Code, most of the municipalities have their own Building bye laws in practice. As per the authorities given by the Local Self Governance Act and Regulation to local authorities, the local authorities can implement building bye laws approved by the town development committees as per the provision made in Town Development Act. In the case of the Kathmandu Valley, due to the continuous changes in the urban character and as per necessity there have been changes in the FAR, ground coverage, set back etc. in the existing bye law and implemented it with periodic modification and updating in 2064.

Building repair and maintenance Guideline Maintenance

For the repair and maintenance of the buildings Department of Urban Development and Building Construction has implemented Building Repair and Maintenance Guidelines in 2062. The information about the major elements of the buildings and the methods for the repair and maintenance has been explained in the five chapters of these guidelines. Though the major subject has been covered in these guidelines however, it has not yet been able to include the innovative construction materials and methods available in the market. It is necessary to update these guidelines by including the subjects in particular, the maintenance of the underground floor, repair and maintenance of internal and external finishing works etc. The appropriate check list for the purpose of the maintenance are also not included in this guideline.

Guideline for Green Building Technology (Draft)

The department, by internalizing the Green Building Technology as an innovative technology under the concept of sustainable development, formulated guideline in 2068. The major objective of this guideline is to construct energy efficient and environment friendly buildings. The different aspects relating to building such as location of the building, construction site, appropriate size of doors and windows for the management of adequate light for the use of human beings, use of solar heat, efficient use of air condition and other equipments, rain water collection etc. have been covered under different chapters. The different table to be used as standard of green technology is given in the annex of this guideline. For the implementation of this guideline in an institutional manner, it is recommended to tie up this guideline with National Building Code.

The review of the documents mentioned above and the overall study and analysis of existing different relevant legal and policy provisions show that

these policy documents have not been able to address the following subjects as expected until now:

- Conservation of special construction materials and technology and local architecture.
- Sustainable and environment friendly building construction technology as per development of innovative technology.
- Mandatory compliance to building code.
- Clear responsibilities and authorities at the central and local level for the implementation of the building policy.
- Building repair and maintenance related with building policy.
- Uniformity in the construction of government and public building, facilities to be made available, use of materials, shape and size etc.
- Classification of the buildings as per use.
- Periodic updating of norms and specifications as per availability of technology and materials to be used for the provision of water supply and sanitation, electrification, civil works during the process of the construction of the building.
- Regulation of high rise building construction.
- Capacity development of the existing institution in the building sector and updating of the legal structures.

The traditional architecture, knowledge of local technology and skills are gradually being lost due to the increasing attraction for imported construction materials and using innovative technology in an attempt towards exploring modernity. It has also become necessary to internalize innovative technology and use of construction materials in order to make the construction technology environment friendly and energy efficient. In this way to maintain the balance and fusion between the conservation of ancient technology, architecture etc and innovative technology, architecture etc. there is a need of legal structures.

b) Status of the availability and demand for government and non government buildings

The analysis of the present quantitative situation of the building sector is necessary in order to prepare the detail framework of these programmes. Accordingly, the present description of the building is preseted in the table below:

Table 32 Analysis of the quantitative situation of the building sector

Type	Types of buildings	Last five years agencies wise number (as far as available)					Estimated existing number	Projected annual growth	New construction
		2064/65	2065/66	2066/67	2067/68	2068/69			
Entertainment	Cinema Hall					399	399	4	4
	Community Building					30	60	2	2
	Museum					11	11	1	1
	Stadium	9				11	11	1	1
Sports	Covered Hall	65				70	70	1	1
	Pre primary school			26772	28772	29272	29272	833	208
Educational institutions	Primary school	29220	30924	31655	32684	33881	33881	932	233
	Lower secondary	9039	10636	11341	11939	13791	27582	950	238
	Secondary school	5894	6516	6928	7559	8233	16466	468	117
	Higher secondary,			2512	2499	3383	10149	290	145
	Campus, niversity					1077	3231	150	75
	Temple, stupa, math					888	2664	3	3
Religious	Baudha Bihar					64	192	1	1
	Mosque, church etc					219	219	10	10
Heritage	Palaces					70	70	0	0
	Public rest house					1232	3696	25	25
Trade	Departmental stores					32	64	6	6
	Commercial complexes					8	16	2	2

Type	Types of buildings	Last five years agencies wise number (as far as available)					Estimated existing number	Projected annual growth	New construction
		2064/65	2065/66	2066/67	2067/68	2068/69			
Industry	Industrial area and factory					1443	2886	50	50
	Cottage industries					228553	228553	11428	114
Improvement	Jail(Bandi griha)					73	292	1	1
	correction centre, ashram					1	30	10	5
Health	Hospital	94	102	102	102	105	315	2	2
	Non hospital	4297	4290	4498	4499	4288	12864	51	51
Godown storage	Transportation					30	30	3	3
	Agriculture based					30	30	2	2
	Medical					80	80	2	2
	Government offices					2850	5700	50	25
Office buildings	Local agencies					4048	16192	2	2
	Corporation					37	555	5	5
	Cooperatives	12785	19963	22885	23540	25167	25167	2476	124
	Registered companies				10464	10386	20772	2400	120
	NGOs					981	1962	196	20

Type	Types of buildings	Last five years agencies wise number (as far as available)					Estimated existing number	Projected annual growth	New construction
		2064/65	2065/66	2066/67	2067/68	2068/69			
Security									
	Security agencies						2250	15	15
	Star hotels	105	96	97	103	106	318	3	3
	Other hotels, lodges	512	573	640	686	721	1442	30	30
	Airports					34	170	1	1
Miscellaneous	Others						500	10	10
	Total	62020	73100	107430	122847	371604	448161	20417	

The information about the quantitative description of the buildings has been collected from different sources in an attempt towards the finalization of the programmes for the proposed business plan. Basically, the major source has been the Economic Survey, 2006-07 and district profiles however, bulletins published from different security agencies for the information generally not possible to collect and web pages of different organizations etc. have also been used.

C) Business Plan and Programmes

The framework of the road map about the activities to be implemented in the building sector in the coming days can be chalked out based on the studies of the overall assessment of the different activities under implementation in the building sector, present condition of the building sector and existing problems and challenges. In particular, it would be appropriate to consider National Building Policy though it is in draft stage now, current Three Year Plan and the different legal and regulatory documents formulated for the development of this sector as the basis.

Twenty years long term vision, mission and objectives

The following twenty years long term vision, mission and objectives would be appropriate to set basically to make it appropriate for the twenty years period by analyzing the subject matters mentioned in the different sections of the mid-term report and preliminary results etc. in the process towards the formulation of this business plan.

Long term vision: To make public and private buildings safe, durable, comfortable and cost effective by utilizing the local construction materials and technology as far as possible.

Mission: To construct and develop safe, durable, cost effective and environment friendly public and private buildings reflecting indigenous and local architecture as far as possible.

Objectives:

- a. To construct safe, durable, comfortable and cost effective buildings.
- b. To promote local architecture, building construction technology related knowledge and skills and construction materials.
- c. To encourage the use of modern technology and new materials in the building construction.

- d. To develop effective financial instrument in the building sector.
- e. To make special arrangement for the design, construction, use and maintenance of the government buildings.
- f. To improve in the institutional and legal structures of the building sector.

Working policy and action plans

The following working policies and action plans have been proposed to achieve the targets mentioned in the proposed long term vision and objectives. The National Building Policy, which is in draft stage now, has been taken as the basis for this proposal. Though the national policy has been taken as the basis for the proposed plans to make it compatible with the policy however, the action plans and programmes which can be accomplished in twenty years is included here since national building policy will remain as a long term document and this business plan is only for twenty years.

(a) Working policy to implement different guidelines and bye laws/standards to make building safe, comfortable and cost effective by categorizing buildings from the point of view of use.

-To construct public and private buildings in cost effective manner without compromising in the safety of the buildings and availability of minimum facilities and services inside the building required for human beings.

-To retrofit the existing buildings and to minimize the possible damages likely to be caused by earthquake, fire, floods, land slides etc.

-To implement bye laws to control the construction of building around historical and archaeological significance.

- Minimum Design Standards which should be available in the public and private buildings, High Rise Buildings Standards for the buildings above 17 meters high as well as implementation of different codes, guidelines, bye laws, norms and specifications etc. appropriate to different geographical regions.

(b) Working policy to implement maintenance plan by formulating it

-To formulate and implement guidelines in different necessary subjects including to prioritize buildings for the regular repair and maintenance.

-To implement gradually by preparing detail work plan in order to repair and maintain the buildings of historical and archaeological significance in time.

-To let the local authorities take the responsibility of the dilapidated buildings having risk in the public safety or causing obstruction in movement left by

the private individuals and get its immediate repair and maintenance by the concerned individuals themselves or if the owners are not identified/located and manage to recoup/ recover the cost involved by using it or otherwise.

(c) Working policy to ensure quality assurance in building construction

- To make an arrangement of taking responsibilities of any damages caused by making mandatory of ensuring the quality of the works being done by the developers, contractors and designers during the process of building construction.

- To make an arrangement whereby no body can obstruct in the inspection of the construction works in any time during the process of the construction and the contractors should make available the quality test reports necessary during the different stages of the construction to the house owner or to the employer

- To make an arrangement to keep the record mentioning the subjects such as foundation, number of reinforcement steel, measurement and distance etc. compulsorily of the portion of the building which will be covered later on attested by the house owners or engineer and contractor.

-To put a restriction on the involvement in the construction of any type of public or private buildings without being registered as the contractor and formulate act including the right to take necessary actions by the local authorities if the construction work is done against this in the case of the private buildings.

(d) Working policy for full compliance to building code by timely improvements

-To make an arrangement of reviewing building code every five years for its timely improvements and amendments.

-To make mandatory to comply to building code in order to ensure the safety and comfortable construction of the building.

(e) Working policy to promote and conserve the local architecture

-To conduct detail study and research about the local architecture and its characteristics existing in the different regions of the country.

-To make available enabling facilities like provision of loan with concessional interest rate or assist in mobilizing the financial resources and waive the fee of building permit for those individuals and organization who builds building based on the local architecture.

-To carry out awareness types of disseminating related works like appropriateness and use of local architecture.

(f) Working policy to encourage local appropriate construction technology, knowledge and skills

-To prepare the inventory of the local construction technology, knowledge and skills existing in different regions of the country.

-To encourage the use of such available technology, knowledge and skills in other geographical and ecological regions if it is appropriate to such regions by disseminating such technology, knowledge and skills.

(g) Working policy to encourage the use of locally available construction materials

-To recommend for the use of appropriate materials by preparing an inventory of local construction materials used in different parts of the country.

-To study and recommend the possibility of using local construction materials in the modern structures also.

-To disseminate the effectiveness of the use of local construction materials.

(h) Working policy to internalize the modern technology in the building construction

-To study the appropriateness of the use of such technologies in the local condition by collecting information of modern technology being applied in the building construction.

-To implement the use of Green Building Technology guideline by formulating it.

-To recommend the use of appropriate technology by carrying out the study and research about the cost effective, energy efficient and environment friendly building construction technology.

(i) Working policy to encourage the use of new materials in building construction

-To study the available new materials and innovation in building construction.

- To recommend appropriate new building construction materials from the point of view of cost effectiveness, energy efficiency and environment friendliness.

(j) Working policy to identify possible financial resources in the building construction

-To carry out necessary study and research to identify and explore the possible financial resources to attract such sources in the construction works of public and private buildings.

-To identify measures for the effective mobilization of the identified resources.

(k) Working policy to establish and develop appropriate financial instrument in building sector

-To explore the possibility of involvement of the financial sector in the construction of public and private buildings.

-To establish and develop necessary instrument for institutionalization of the possibility of financial sector involvement in this sector by creating an appropriate environment.

(l) Working policy to increase the involvement of the financial sector in building

-To encourage Employees Provident Fund, Civil Investment Fund and public corporation and organization like welfare fund associated with different agencies organizations to invest in the building sector.

-To undertake necessary facilitation in order to promote partnership between public and private sector in building sector.

-To develop an appropriate instrument to use certain portion of the amount received from remittance in the building sector.

(m) Working policy to maintain certain identity and facility while designing the government building

-To maintain fixed shape, facade and structure as per agencies while designing the fully government owned and semi government owned corporations building.

- To maintain consistency in the use of colour in the exterior facade and interior rooms of the public buildings.

- To maintain consistency by preparing standards regarding the facilities to be made available such as furniture and equipments, toilet, air conditioning, light and ventilation facilities, lamps, shape and size of the room according to the responsibilities of the post and status or level of the employees in the public buildings.

-To make an arrangement of design,construction and repair and maintenance only to be done by Department of Urban Development and Building Construction of all types of central level government office buildings including VVIP's official residential buildings.

(n) Working policy to regulate the system of renting government building

-To make an arrangement of taking building for rent which is constructed as per approved building permit, appropriate from the point of view of security and have all the facilities required in the public buildings.In this process, make an arrangement of carrying out vulnerability assessment to ensure the building safety.

-To implement evaluation method to bring consistency in the valuation of immovable property and for rental buildings.

(o) Working policy to manage maintenance of the government buildings

- To prepare maintenance plan by preparing inventory of all government buildings with drawings of existing shapes and to update such inventory after every five years period.

-To carry out maintenance works according to priority based on the indicators such as structural safety, historical and archaeological significance, law and order, administrative significance etc. of the buildings while undertaking maintenance works.

-To prepare plan in time and implement by assessing the condition for reconstruction of government buildings which are not feasible for maintenance.

(p) Working policy to enhance the capacity of the stakeholders by institutional improvement in building sector

-To assign the responsibility of implementing the National Building Policy by establishing Department of Urban Development and Building Construction as the apex body for coordination among the stakeholders of the building sector.

-To organize trainings,interactions and seminars for the periodic capacity enhancement of different experts relating to building design and construction.

-To include in an integrated manner the subjects such as water supply,electricity, machineries, equipments etc.while formulating the plans and programmes relating to building by taking into consideration the services and facilities to be made available in the buildings.

-To manage necessary physical infrastructures, manpower and resources in order to enhance the organizational capacity of the institutions working in the building sector.

(q) Working policy to improve timely in the existing legal instruments relating to building sector

-To put restriction on the construction of any building without building permit including the government buildings by making the procedures of approval for building construction simple and effective.

-To assign the responsibility of monitoring,evaluation and regulation of compliance to different codes,guidelines,bye laws etc. relating to building construction to Department of Urban Development and Building Construction at the central level and the concerned municipality and VDC at the local level. The division offices of the department will make available necessary technical support to local authorities in this regard.

-To implement gradually to involve at least one trained technician having completed training on earthquake resistant building construction from the licensed training institution imparting such training to ensure the safe building construction in any construction of building works.

-To make an arrangement by determining educational qualification and experience of different experts involved in the building sector .

-To institutionalize the process of minimizing the risk by insuring the buildings.

- To implement with necessary improvements and amendments by reviewing the existing legal instruments for mandatory compliance of building policy by formulating different codes,guidelines,bye laws,norms and specification etc. as the jurisdiction of the existing building act and regulation is limited and inadequate for the implementation of this policy.

-To make acts punishable which make changes in the use without permission.If there is a need to make change in previous use of building during the time of approval of plan, the local authority can issue such permit after conducting the Vulnerability Assessment of the building.

-The FM or mobile towers cannot be installed in the building unless it is proved appropriate from the point of view of the safety of the building.

Phase wise plans and programmes

The following activities need to be implemented as the major programmes in a planned manner to achieve the targets set in this business plan based on the proposed working policies and actions plans mentioned above.

Proposed major programmes

1)Building sector regulation programme: The following guidelines and bye laws shall be implemented after its formulation under this heading to make it suitable to different ecological regions.

- Building design guidelines
- Building construction guidelines
- Public building maintenance guidelines and working policy
- Private building maintenance guidelines
- Geen building guidelines
- Building norms
- Specifications of the building construction works
- Guidelines relating to high rise building
- Minimum design standard for public buildings
- Minimum design standard for private buildings
- Different building design based on application and construction guidelines

2)Disaster minimization programe: To continue the implementation of builing code by reviewing and updating it. Retrofitting works of the important buildings will be carried out by assessment of vulnerability under this programme. It is proposed to assign priority to the buildings of those agencies who will be involved in the provision of immediate relief facilities like medical treatment and water supply, electricity,food,security etc. as well as school buildings which could be uesd as the temporary shelter towards the attempt of minimizing the effect of disaster.

3) Conservation of local architecture,technology and construction materials: Study and research about special indigeneous/local architecture,technology and construction materials under this programme to increase public awareness about the local technology and construction materials for its effective use.

4) Programme to use innovative/new technology and construction materials: Under this programme study and research will be carried out to encourage the use of modern appropriate architecture, technology and materials according to environment and energy effectiveness.

5) Building repair and improvement programme: To prepare an inventory of important and public buildings with detail information about the types of building and present condition etc., and accordingly prepare a maintenance plan as per the necessity and priority. The maintenance works of the buildings will be implemented gradually as per plan prepared in that way.

6) Building construction programme: The new buildings will be constructed as per the necessity and priority under this programme.

7) Financial attraction in building sector: The works such as establishment and mobilization of appropriate instrument, to carry out study and research about the mobilizing and attracting different types of financial resources for different types of buildings, etc. will be carried out under this programme. The priority will be given to public private partnership concept in this process.

8) Government building special programme: The works such as to manage and direct the maintenance of government buildings, to manage the process to be adopted while renting of government buildings, to bring consistency in the facilities to be made available and to maintain special identity in the design of government building etc. will be carried out under this programme.

9) Building sector institutional improvement programme: The works such as institutional strengthening, legal arrangement for the insurance of the government buildings, capacity enhancement of the stakeholders of the buildings and to make arrangement of an appropriate legal structures to implement this business plan etc. will be implemented under this programme.

Table 33 Annual quantity of requirement of maintenance and construction of building

Type	Annual necessary new construction				First ten years annual maintenance				Remaining ten years annual maintenance				
	Government	Corporation	Organized sector	Total	Government	Corporation	Organized sector	Total	Government	Corporation	Organized sector	Total	
Entertainment			4	4	0	0		40	40	0	0	44	44
	1		1	2	3	0	3	6	6	4	0	4	8
			1	1	0	0	1	1	1	0	0	2	2
Sports		1		1	0	1	0	1	1	0	2	0	2
		1		1	0	7	0	7	7	0	8	0	8
			208	208	0	0	2927	2927	0	0	3135	3135	3135
Educational institutions	46		187	233	669	0	2719	3388	715	0	2906	3621	3621
	50		188	238	579	0	2179	2758	629	0	2367	2996	2996
	11		106	117	155	0	1492	1647	166	0	1598	1764	1764
			145	145	0	0	1015	1015	0	0	1160	1160	1160
Religious			75	75	0	0	323	323	0	0	398	398	398
			3	3	0	0	266	266	0	0	269	269	269
			1	1	0	0	19	19	0	0	20	20	20
			10	10	0	0	22	22	0	0	32	32	32
Heritage				0	7			7	7			7	7
	15		10	25	222	0	148	370	237	0	158	395	395
Traditional			6	6	0	0	6	6	0	0	12	12	12
			2	2	0	0	2	2	0	0	4	4	4

Type	Annual necessary new construction				First ten years annual maintenance			Remaining ten years annual maintenance				
	Government	Corporation	Organized sector		Government	Corporation	Organized sector	Government	Corporation	Organized sector		
Industry		5	45	50	0	29	260	289	0	34	305	339
		1	113	114	0	200	22655	22855	0	201	22768	22969
	1			1	29	0	0	29	30	0	0	30
	3			3	3	0	0	3	6	0	0	6
Health Improvement	1		1	2	16	0	16	32	17	0	17	34
	25		26	51	631	0	656	1286	656	0	682	1337
		3		3	0	3	0	3	0	6	0	6
Godown storage	1		1	2	2	0	2	3	3	0	3	5
		1	1	2	0	4	4	8	0	5	5	10
	25			25	570	0	0	570	595	0	0	595
	2			2	1619	0	0	1619	1621	0	0	1621
Office buildings		5		5	0	56	0	56	0	61	0	61
			124	124	0	0	2517	2517	0	0	2641	2641
			120	120	0	0	2077	2077	0	0	2197	2197
			20	20	0	0	196	196	0	0	216	216
Security												
	15			15	225	0	0	225	240	0	0	240
Transportation			3	3	0	0	32	32	0	0	35	35

Type	Annual necessary new construction			First ten years annual maintenance			Remaining ten years annual maintenance		
	Government	Corporation	Organized sector	Government	Corporation	Organized sector	Government	Corporation	Organized sector
Miscellaneous			30	30	0	0	144	0	174
	1			1	17	0	0	18	0
	3	3	4	10	15	20	50	18	24
	200	20	1435	1655	4762	315	39741	4961	41175
							44816	335	46471

The Fiscal Year 2068/69 has been taken as the base year for the calculation of the cost estimate for the construction of the new buildings as well as for the maintenance of old buildings which is as follows. In order to make the need for the investment realistic and practical, it is assumed that the cost will be increased by 10 per cent every year for the coming 20 year plan period and accordingly the cost estimates and investment programme is presented here. The detail 20 year's annual programme of the organized sector or the private sector, corporation and government is presented in the next chapter of this report.

Table 34 Cost estimate of new building construction works

Type	Types of buildings	Annual quantity	Quantity per one	Unit	Rate	Annual investment requirement Rs in '000			
						Government	Corporation	Organized sector	Total
Entertainment	Cinema Hall	4	5000	Sq.ft	3500	0	0	70000	70000
	Community Building	2	4000	Sq.ft	2500	10000	0	10000	20000
	Museum	1	4000	Sq.ft	2500	0	0	10000	10000
Sports	Stadium	1	1	No.	50000000	0	50000	0	50000

Type	Types of buildings	Annual quantity	Quantity per one	Unit	Rate	Annual investment requirement Rs in '000		
						Government	Corporation	Organized sector
Educational institutions I	Covered Hall	1	4000	Sq.ft	2500	0	10000	0
	Pre primary school	208	1500	Sq.ft	2000	0	0	624000
	Primary school	233	3000	Sq.ft	2000	276000	0	1122000
	Lower secondary	238	4500	Sq.ft	2000	450000	0	1692000
	Secondary school	117	6000	Sq.ft	2500	165000	0	1590000
	Higher secondary	145	8000	Sq.ft	2500	0	0	2900000
	Campus,University	75	10000	Sq.ft	2500	0	0	1875000
Religious	Temple, stupa, math	3	1	No.	500000	0	0	1500
	Baudha Bihar	1	1	No.	5000000	0	0	5000
	Mosque, church etc	10	1	No.	1000000	0	0	10000
	Palaces	0		Sq.ft		0	0	0
Heritage	Public rest house	25	1	No.	300000	4500	0	3000
	Departmental stores	6	1	No.	50000000	0	0	300000
Trade	Commercial complexes	2	2000	Sq.ft	2500	0	0	10000

Type	Types of buildings	Annual quantity	Quantity per one	Unit	Rate	Annual investment requirement Rs in '000			
						Government	Corporation	Organized sector	Total
Industry	Industrial area and factory	50	5000	Sq.ft	2500	0	62500	562500	625000
	Cottage industries	114	1500	Sq.ft	2000	0	3000	339000	342000
Improve ment	Jail(Bandi griha)	1	10000	Sq.ft	10000	100000	0	0	100000
	Sudhar griha,ashram	3	5000	Sq.ft	2000	30000	0	0	30000
Health	Hospital	2	8000	Sq.ft	3000	24000	0	24000	48000
	Non hospital	51	1500	Sq.ft	2000	75000	0	78000	153000
Godownstorage	Transportation	3	1	No.	10000000	0	30000	0	30000
	Agriculture based	2	1	No.	5000000	5000	0	5000	10000
Office buildings	Medical	2	2000	Sq.ft	2500	0	5000	5000	10000
	Government offices	25	2000	Sq.ft	2500	125000	0	0	125000
Office buildings	Local agencies	2	1500	Sq.ft	2500	7500	0	0	7500
	Corporation	5	2000	Sq.ft	2500	0	25000	0	25000
Office buildings	Cooperatives	124	1000	Sq.ft	2500	0	0	310000	310000
	Registered companies	120	1000	Sq.ft	2500	0	0	300000	300000
Office buildings	NGOs	20	2000	Sq.ft	2500	0	0	100000	100000

Type	Types of buildings	Annual quantity	Quantity per one	Unit	Rate	Annual investment requirement Rs in '000			
						Government	Corporation	Organized sector	Total
Security	Security agencies	15	4000	Sq.ft	2000	120000	0	0	120000
Guest hospitality	Star hotels	3	6000	Sq.ft	6000	0	0	108000	108000
	Other hotels, lodges	30	3000	Sq.ft	4000	0	0	360000	360000
Miscellaneous	Airports	1	1	No.	50000000	50000	0	0	50000
	Others	10	1000	Sq.ft	2000	6000	6000	8000	20000
	Total	1655				1448000	191500	12422000	14061500

Table 35 Cost of building maintenance works

Type	Types of buildings	Rate per building	First ten years annual investment Rs.in '000				Next ten years annual investment]			
			Government	Corporation	Organized sector	Total	Government	Corporation	Organized sector	Total
Entertainment	Cinema Hall	500000	0	0	20000	20000	0	0	21950	21950
	Community Building	300000	900	0	900	1800	1200	0	1200	2400

|

Type	Types of buildings	Rate per building	First ten years annual investment Rs.in '000				Next ten years annual investment]			
			Government	Corporation	Organized sector	Total	Government	Corporation	Organized sector	Total
Sports	Museum	200000	0	0	200	200	0	0	420	420
	Stadium	2500000	0	2500	0	2500	0	5250	0	5250
	Covered Hall	250000	0	1750	0	1750	0	2000	0	2000
Educational institution	Pre primary school	200000	0	0	585400	585400	0	0	627040	627040
	Primary school	200000	133800	0	543800	677600	142979	0	581241	724220
	Lower secondary	250000	144750	0	544750	689500	157363	0	591687	749050
	Secondary school	250000	38750	0	373000	411750	41452	0	399448	440900
	Higher secondary	300000	0	0	304500	304500	0	0	347970	347970
	Campus, University	400000	0	0	129200	129200	0	0	159240	159240
Religious	Temple, stupa, math	200000	0	0	53200	53200	0	0	53880	53880
	Baudha Bihar	500000	0	0	9500	9500	0	0	10100	10100
	Mosque, church etc	200000	0	0	4400	4400	0	0	6380	6380
Heritage	Palaces	1000000	7000	0	0	7000	7000	0	0	7000
	Public rest house	100000	22200	0	14800	37000	23676	0	15784	39460
Tra	Departmental stores	500000	0	0	3000	3000	0	0	6200	6200

Type	Types of buildings	Rate per building	First ten years annual investment Rs.in '000				Next ten years annual investment]			
			Government	Corporation	Organized sector	Total	Government	Corporation	Organized sector	Total
Industry	Commercial complexes	400000	0	0	800	800	0	0	1440	1440
	Industrial area and factory	300000	0	8700	78000	86700	0	10158	91422	101580
	Cottage industries	200000	0	40000	4531000	4571000	0	40297	4553563	4593860
Improve ment	Jail(Bandi griha)	500000	14500	0	0	14500	15100	0	0	15100
	Sudhar griha,ashram	300000	900	0	0	900	1800	0	0	1800
Health	Hospital	500000	8000	0	8000	16000	8375	0	8375	16750
	Non hospital	200000	126200	0	131200	257400	131118	0	136362	267480
Godown storage	Transportation	400000	0	1200	0	1200	0	2400	0	2400
	Agriculture based	200000	400	0	400	800	500	0	500	1000
	Medical	150000	0	600	600	1200	0	750	750	1500
Office buildings	Government offices	300000	171000	0	0	171000	178500	0	0	178500
	Local agencies	250000	404750	0	0	404750	405300	0	0	405300
	Corporation	250000	0	14000	0	14000	0	15125	0	15125
	Cooperatives	200000	0	0	503400	503400	0	0	528140	528140

Type	Types of buildings	Rate per building	First ten years annual investment Rs.in '000				Next ten years annual investment]			
			Government	Corporation	Organized sector	Total	Government	Corporation	Organized sector	Total
	Registered companies	200000	0	0	415400	415400	0	0	439440	439440
	NGOs	300000	0	0	58800	58800	0	0	64860	64860
Security	Security agencies	200000	45000	0	0	45000	48000	0	0	48000
Guest hospitality	Star hotels	800000	0	0	25600	25600	0	0	27840	27840
	Other hotels, lodges	400000	0	0	57600	57600	0	0	69680	69680
Miscellaneous	Airports	10000000	170000	0	0	170000	180000	0	0	180000
	Others	150000	2250	2250	3000	7500	2700	2700	3600	9000
Total			1290400	71000	8400450	9761850	1345063	78680	8748512	10172255

The following quantitative targets have been determined by taking into consideration the projected numerical quantities of buildings prepared to include all the activities proposed in the working policies as per vision, mission and objectives of this business plan.

Table 36 Annual quantitative targets

S.No .	Major programme	20 Year total quantity @)	Annual quantity target weightage			
			Govern emnt	Corpora tion	Organized sector	Total
1	Regulation of building sector Formulation of different bye laws, design standards etc. Design Standard Norms according to geographical regions Specifications according to geographical regions Formulation of different guidelines including high rise buildings etc					
		2	0.10			0.10
		4	0.20			0.20
		4	0.20			0.20
		5	0.25			0.25
2	Minimization of disaster Vulnerability assessment of buildings Building retrofitting School buildings Health buildings Other buildings Building code update Building code implementation	6953	69.53		278.12	347.65
		5360	53.60		214.4	268.00
		1308	13.08		52.32	65.40
		285	2.85		11.4	14.25
		3	0.15			0.15
		1	0.05			0.05
3	Local architecture and technology conservation Detail study of historical heritage Study of local architecture Study of local building technology					
		2	0.10			0.10
		10	0.50			0.50
		10	0.50			0.50

S.No	Major programme	20 Year total quantity @)	Annual quantity target weightage		
			Govern emnt	Corpora tion	Organized sector Total
	Study of local construction materials	10	0.50		0.50
	Architecture, construction materials conservation	1	0.05		0.05
	Incentive package in conservation	20	1.00		1.00
	Enhancement of public awareness including construction of model building	20	1.00		1.00
4	Use of innovative technology and materials		0.00		0.00
	Periodic study of innovative technology and materials	10	0.50		0.50
	Sustainable building technology guidelines	1	0.05		0.05
	Evaluation of relevancy of innovative	10	0.50		0.50
	Recommendation for use and public awareness	1	0.05		0.05
5	Building maintenance programme		0.00		0.00
	Building maintenance guidelines	2	0.10		0.10
	Listing of different types of buildings	10	0.50		0.50
	Maintenance plan of listed buildings	10	0.50		0.50
	Maintenance plan implementation	912870	4762	315	39741
6	New building construction programme	33100	200	20	1435
7	Quality assurance in buildings				1655
	Study of present condition	2	0.10		0.10
	Establishment of laboratories according to needs	2	0.10		0.10
	Capacity enhancement of existing laboratories	10	0.50		0.50
	Standard of quality level	1	0.05		0.05
	Implementation and monitoring	1	0.05		0.05

8	Government building special programme Different standard and formulation of guidelines Standard for the establishment of government building in rental building Building evaluation standard and guidelines	10	0.50				0.50
		2	0.10				0.10
		2	0.10				0.10
	Maintenance policy of the government buildings, standard and guidelines	5	0.25				0.25
	Priority investment plan of maintenance of government buildings	2	0.10				0.10
9	Building sector financial management programme Study of investment possibility in building sector Study of institutional and management of financial sector Joint venture plan between public and private in building sector Formulation of investment policy and implementation in building sector Capacity enhancement of financial sector	2	0.10				0.10
		2	0.10				0.10
		2	0.10				0.10
		2	0.10				0.10
		10	0.50				0.50
10	Institutional capacity development programme Institutional and management study of the building sector Periodic updating and implementation of building policy Study of building related facilities management Capacity enhancement of medium and high level experts in building sector	2	0.10				0.10
		3	0.15				0.15
		3	0.15				0.15
		20	1.00				1.00
		20	1.00				1.00
	▪ Mason training	1	0.05				0.05
	▪ Formulation and implementation of building insurance policy	3	0.15				0.15
	▪ Updating of building sector related legal structures						
	▪ Establishment of monitoring instrument and building monitoring evaluation	1	0.05				0.05

Five year plans and programmes

The business plan is prepared generally for the period of three to five years as mentioned in the beginning of this report. The detail framework of the departmental programmes for the coming five years as per the proposed business plan of the building sector is presented in the following way.

Table 37 The framework of the departmental programmes for the coming five years as per the proposed business plan of the building sector
(Proposed budget in Rs. Lakh)

S.No	Major programme	Year 1		Year 2		Year 3		Year 4		Year 5	
		Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget
1	Regulation of building sector										
a)	Different byelaws/standards	Guidelines for the maintenance of different historical buildings of Kathmandu	2	-	-	-	-	-	-	-	-
b)	Norms according to geographical region{	-	-	Construction norms as per different ecological/geographical regions	33	Construction specifications as per different ecological/geographical regions	36	-	-	-	-

S.N o	Major programme	Year 1		Year 2		Year 3		Year 4		Year 5	
		Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget
c)	Specification Different guidelines	-	-	-	-	-	-	-	-	-	-
d)		High rise/multi storey building guidelines	3	-	-	-	-	-	-	Design standard and guidelines of community buildings	4
2	Disaster minimization										
a _	Vulnerability assessment of schools,health and other important buildings	Vulnerability assessment of 70 schools,health and other important buildings	139	Vulnerability assessment of 70 schools, health and other important buildings	150	Vulnerability assessment of 70 schools ,health and other important buildings	168	Vulnerability assessment of 70 schools, health and other important buildings	185	Vulnerability assessment of 70 schools ,health and other important buildings	203
b)	Building retrofitting: M Schoolbuilding Health buildings										
		Retrofitting of 54 schools	268	Retrofitting of 54 schools	295	Retrofitting of 54 schools	324	Retrofitting of 54 schools	357	Retrofitting of 54 schools	392
		Retrofitting of 13 health buildings	131	Retrofitting of 13 health buildings	144	Retrofitting of 13 health buildings	159	Retrofitting of 13 health buildings	174	Retrofitting of 13 health buildings	192
	Others (relief works related) buildings	Retrofitting of 3 other buildings	14	Retrofitting of 3 other buildings	15	Retrofitting of 3 other buildings	17	Retrofitting of 3 other buildings	19	Retrofitting of 3 other buildings	20

S.No	Major programme	Year 1		Year 2		Year 3		Year 4		Year 5	
		Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget
c)	Improvement of building code	-	-	-	-	-	-	-	-	-	-
d)	Implementation of building code	Municipality of Terai and Kathmandu	15	Municipality of Terai and Kathmandu	16	Municipality of Terai and Kathmandu	18	Other remaining municipalities	19	Municipality of Terai and Kathmandu	21
3	Local architecture and technology conservation										
a)	Detail study of heritage	-	-	-	-	-	-	Study of heritage buildings	7		
b)	Study of architecture	-	-	-	-	-	-	-	-	Study of local/indigenous architecture	15
c)	Study of building technology	-	-	-	-	-	-	-	-	Study of local construction technology	15
d)	Study of building materials	-	-	-	-	-	-	-	-	Study of local construction materials	15
e)	Conservation guidelines	-	-	-	-	Design standard and guidelines of architecture and technology conservation	4	-	-	-	-
f)	Incentive packages in	For construction in world heritage site	10	For construction	11	For construction in world heritage	12	For construction in world	13	For construction in world	15

S.No	Major programme	Year 1		Year 2		Year 3		Year 4		Year 5	
		Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget
	conservation			in world heritage site		site		heritage site		heritage site	
g)	Model building and public awareness	Model house of Terai architecture	15	Model house of Terai and mountain architecture	17	Model house of mountain and himal architecture	18	Model house of Terai mountain and himal architecture	20	Model house of Terai, mountain and himal architecture	22
4		Use of innovative technology and materials									
a)	Periodic study	Study of new materials and technology	2	-	-	Study of new materials and technology	2	-	-	Study of new materials and technology	3
b)	Sustainable building technology guidelines	Implementation of green(sustainable) building guidelines	2	-	-			-	-		
c)	Relevant assessment	Study of the relevance of new materials and technology	2	-	-	Study of the relevance of new materials and technology	2	-	-	Study of the relevance of new materials and technology	3
d)	Application and public awareness	Multi disaster safe model building	5	Multi disaster safe model building	6	Multi disaster safe model building	6	Multi disaster safe model building	7	Multi disaster safe model building	7
5		Building maintenance programme									
a)	Building maintenance	-	-	-	-	-	-	-	-	-	-

S.N o	Major programme	Year 1		Year 2		Year 3		Year 4		Year 5	
		Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget
b)	guidelines Listing of buildings	-	-	-	-	-	-	Listing of important buildings	20	-	-
c)	Maintenance plan	-	-	-	-	-	-	-	-	Priority of building maintenance	9
d)	Plan implementation	Building maintenance	3530	Building maintenance	3883	Building maintenance	4271	Building maintenance	4698	Building maintenance	5168
6	New building construction	Different buildings construction	3745	Different buildings construction	4120	Different buildings construction	4531	Different buildings construction	4985	Different buildings construction	5483
7	Quality assurance										
a)	Study of present condition	Evaluation of quality level at present	2	-	-	-	-	-	-	-	-
b)	Establishment of laboratory	-	-	Establishment of laboratory in Hetauda	100	-	-	-	-	-	-
c)	Capacity enhancement of laboratory	-	-	-	-	Capacity enhancement of the laboratory	12	-	-	Capacity enhancement of the laboratory	15
d)	Quality level standard	Quality assurance bye law/standard	2	-	-	-	-	-	-	-	-
e)	Implementation	Monitoring of quality	10	Monitoring of	11	Monitoring of	12	Monitoring of	13	Monitoring of	15

S.N o	Major programme and monitoring	Year 1		Year 2		Year 3		Year 4		Year 5	
		Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget
8	and monitoring Government building programme	level		quality level		quality level		quality level		quality level	
a)	Standard and guidelines	-	-	-	-	Bye law for government building design	2	-	-	Bye law for government building design	3
b)	Standard of rental buildings	Bye law and guidelines for renting office buildings	2	-	-	-	-	-	-	-	-
c)	Evaluation standard/byelaw guidelines	-	-	Bye law for immovable property evaluation	2	-	-	-	-	-	-
d)	Maintenance policy, bye laws guidelines	Building maintenance guidelines	2	-	-	-	-	-	-	-	-
e)	Priority investment projects	Priority investment plan for maintenance of government building	2	-	-	-	-	-	-	-	-
9	Financial management										
a)	Possibility of	Investment	2	-	-	-	-	-	-	-	-

S.No	Major programme	Year 1		Year 2		Year 3		Year 4		Year 5	
		Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget	Programme	Budget
	investment	possibilities in building sector									
b)	Institutional study	-	-	Capacity study of financial institutions in building sector	2	-	-	-	-	-	-
c)	Joint venture/Partnership of public and private	Feasibility study of joint venture of public and private sector in building sector	2	-	-	-	-	-	-	-	-
d)	Investment policy and implementation	-	-	-	-	Investment policy in building sector	4	-	-	-	-
e)	Capacity enhancement	-	-	Capacity enhancement of financial institutions in building sector	11	-	-	Capacity enhancement of financial institutions in building sector	15	-	-

10	Institutional capacity development											
a)	Institutional and management study	-	-	-	-	-	-	-	-	-	Institutional managerial capacity enhancement of building sector	3
b)	Facilities study	-	-	-	-	-	-	-	Study of building facilities	3	-	-
c)	Capacity enhancement of the experts	Training, seminar and study tours	20	Training, seminar and study tours	22	Training, seminar and study tours	24	Training, seminar and study tours	27	Training, seminar and study tours	29	29
d)	Technicians/artisans training	Implementation of artisans/technicians training	50	Implementation of artisans/technicians training	55	Implementation of artisans/technicians training	61	Implementation of artisans/technicians training	67	Implementation of artisans/technicians training	73	73
e)	Insurance policy and implementation	-	-	-	-	Building Insurance policy	2	-	-	-	-	-
f)	Improvement of acts	Improvement of building act	2	Improvement in legal structure	2	-	-	-	-	-	-	-
g)	Monitoring and evaluation	Building sectoral monitoring and evaluation	30	Building sectoral monitoring and evaluation	33	Building sectoral monitoring and evaluation	36	Building sectoral monitoring and evaluation	40	Building sectoral monitoring and evaluation	44	44
	Total		8009		8928		9721		10669		11769	11769

Budget arrangements for the plan implementation

The subjects like potential financial sources, present trend and investment requirements for the implementation of this business plan are presented in the following tables.

Table 38 Description of the Programme wise Annual Investment Requirement from the Government Sector

S.N o	Major programme	Annual Investment Requirement Rs. in Lakh																				Total
		Base Year	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
1	Regulation of building sector Different byelaws/standards Norms according to geographical region { Specification Different guidelines	2	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	7
		0	33	0	0	0	0	0	0	0	0	0	86	0	0	0	0	0	0	0	0	119
		0	0	36	0	0	0	0	0	0	0	0	0	94	0	0	0	0	0	0	0	130
		3	0	0	0	4	0	0	0	6	0	0	0	0	9	0	0	0	0	15	0	37
2	Disaster minimization ▪ Vulnerability assessment of the buildings Building retrofitting: ▪ School buildings ▪ Health buildings ▪ Other buildings ▪ Updating of building code ▪ Implementation of building code	139	150	168	185	203	224	246	271	298	327	360	396	436	479	527	580	638	702	772	849	7950
		268	295	324	357	392	432	475	522	574	632	695	765	841	925	1018	1120	1231	1355	1490	1639	15350
		131	144	159	174	192	211	232	255	281	309	340	374	411	452	497	547	602	662	728	801	7303
3	Local architecture and technology conservation Detail study of heritage Study of architecture Study of building technology	14	15	17	19	20	23	25	27	30	33	36	40	44	48	53	58	64	71	78	86	802
		0	0	0	0	0	3	0	0	0	0	5	0	0	0	0	8	0	0	0	0	16
		15	16	18	19	21	23	26	28	31	34	38	41	46	50	55	61	67	74	81	89	834
																						0
		0	0	0	7	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	24
	0	0	0	0	15	0	0	0	0	0	0	0	0	31	0	0	0	0	0	0	46	
	0	0	0	0	15	0	0	0	0	0	0	0	0	31	0	0	0	0	0	0	46	

S.N o	Major programme	Annual Investment Requirement Rs. in Lakh																				Total
		Base Year	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
4	Study of building materials Conservation guidelines	0	0	0	0	15	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	46
	Incentive packages in conservation	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	Model building and public awareness	10	11	12	13	15	16	18	19	21	24	26	29	31	35	38	42	46	51	56	61	573
		15	17	18	20	22	24	27	29	32	35	39	43	47	52	57	63	69	76	83	92	889
	Use of innovative technology and materials																					
5	Periodic study	2	0	2	0	3	0	4	0	4	0	5	0	6	0	8	0	9	0	11	0	54
	Sustainable building technology guidelines	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	Relevant assessment	2	0	2	0	3	0	4	0	4	0	5	0	6	0	8	0	9	0	11	0	54
	Application and public awareness	5	6	6	7	7	8	9	10	11	12	13	14	16	17	19	21	23	25	28	30	284
	Building maintenance programme																					
	Building maintenance guidelines	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	21	0	0	0	0	29
	Listing of buildings	0	0	0	20	0	0	0	0	32	0	0	0	0	52	0	0	0	0	28	0	132
	Maintenance plan	0	0	0	0	9	0	0	0	0	14	0	0	0	0	23	0	0	0	0	12	58
	Plan implementation	12904	14194	15614	17175	18893	20782	22860	25146	27661	30427	34887	38376	42213	46435	51078	56186	61804	67985	74783	82262	761665
	Quality assurance	14480	15928	17521	19273	21200	23320	25652	28217	31089	34143	37557	41313	45444	49989	54988	60487	66535	73189	80508	88558	829342
7	Study of present condition	2	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	7
	Establishment of laboratory	0	100	0	0	0	0	0	0	0	0	0	286	0	0	0	0	0	0	0	0	386
	Capacity enhancement of laboratory	0	0	12	0	15	0	18	0	21	0	26	0	31	0	38	0	46	0	56	61	324
	Quality level standard	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	Implementation and monitoring	10	11	12	13	15	16	18	19	21	24	26	29	31	35	38	42	46	51	56	61	573
	Government building programme																					

S.N	Major programme	Annual Investment Requirement Rs. in Lakh																				Total
		Base Year	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
8	Standard and guidelines Standard of rental buildings Evaluation standard/byelaw guidelines Maintenance policy, bye laws guidelines Priority investment projects	0	0	2	0	3	0	4	0	4	0	5	0	6	0	8	0	9	0	11	12	64
		2	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	8
		0	2	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	8
		2	0	0	0	0	3	0	0	0	0	5	0	0	0	0	8	0	0	0	12	30
		2	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	7
9	Financial management Possibility of investment Institutional study Joint venture/Partnership of public and private Investment policy and implementation Capacity enhancement																					
		2	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	8
		0	2	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	8
		2	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	7
		0	0	4	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	13
10	Institutional capacity development Institutional and management study Updating the building policy Facilities study Capacity enhancement of the experts Technicians/artisans training Insurance policy and implementation Improvement of acts Monitoring and evaluation	0	11	0	15	0	16	0	20	0	24	0	29	0	35	0	42	0	51	0	62	305
																						0
		0	0	0	0	3	0	0	0	0	0	5	0	0	0	0	0	0	9	0	0	17
		2	0	0	0	0	0	4	0	0	0	0	0	0	7	0	0	0	0	0	0	13
		0	0	0	3	0	0	0	0	0	5	0	0	0	0	0	8	0	0	0	0	16
Total	1	281.18	3030	34023	37425	41168	45284	49813	54794	60273	66301	72931	80224	88246	97071	106778	117456	129201	142122	15334	17197	161068

Table 39 Description of the Programme wise Annual Investment Requirement from the Corporation Sector

S.No.	Major programme	Annual Investment Requirement Rs. in Lakh																				Total
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
5	Building maintenance	710	781	839	945	1040	1143	1238	1384	1522	1674	1842	2026	2228	2451	266	286	322	3389	3948	4342	4665
6	New building construction	1915	2107	2317	2549	3044	3393	3732	4105	4515	4967	5464	6010	6611	7272	7999	8799	9679	10647	11712	10982	
	Total	2625	2888	3176	3494	3983	4228	4650	5151	5527	6090	6809	7489	8238	9062	10065	12062	13268	14595	16054	19347	

Table 40 Description of the Programme wise Annual Investment Requirement from the Organized Sector

S. N. O.		Annual Investment Requirement Rs. in Lakh																				Total
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
1	Disaster minimization <ul style="list-style-type: none">Vulnerability assessment of the buildings Building retrofitting: <ul style="list-style-type: none">School buildingsHealth buildingsOther buildings	556	612	673	740	814	895	985	1083	1192	1311	1442	1586	1745	1919	2111	2323	2555	2810	3091	3400	31845
2	Building maintenance programme	8405	9246	10164	11181	12292	13529	14820	163702	18071	21788	29678	32644	20008	31909	35910	38601	42461	46761	51367	481386	
3	New building construction	12420	13642	15306	16337	18187	20088	22063	24270	26277	29204	32205	35414	38965	42841	47725	51888	57088	62786	69053	759718	
	Total	21043	23146	25424	28086	30905	33894	37295	41074	45102	49690	54580	60090	66042	72672	79919	87931	96934	106327	116990	128389	

Table 41 Description of the Programme wise Annual Investment Requirement from the Department of Urban Development and Building Construction

S. No.	Major programme	Annual Investment Requirement Rs. in Lakh																				Total
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
1	Regulation of building sector <ul style="list-style-type: none"> Different byelaws/standards Norms according to geographical region Specification Different guidelines 		0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	7
		0	33	0	0	0	0	0	0	0	0	86	0	0	0	0	0	0	0	0	0	119
		0	0	36	0	0	0	0	0	0	0	0	94	0	0	0	0	0	0	0	0	130
		3	0	0	0	4	0	0	0	6	0	0	9	0	0	0	0	0	15	0	0	37
2	Disaster minimization <ul style="list-style-type: none"> Vulnerability assessment of the buildings 																					
		139	150	168	185	203	224	246	271	298	327	360	396	436	479	527	580	638	702	772	849	790
	Building retrofitting: <ul style="list-style-type: none"> School buildings Health buildings Other buildings 	268	295	324	357	392	432	475	522	574	632	695	765	841	925	1018	1120	1231	1355	1490	1639	1530
		131	144	159	174	192	211	232	255	281	309	340	374	411	452	497	547	602	662	728	801	793
		14	15	17	19	20	23	25	27	30	33	36	40	44	48	53	58	64	71	78	86	802

S. No.	Major programme	Annual Investment Requirement Rs. in Lakh																				Total
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
	<ul style="list-style-type: none"> Updating of building code Implementation of building code 	0	0	0	0	3	0	0	0	0	0	5	0	0	0	0	8	0	0	0	0	16
		15	16	18	19	21	23	26	28	31	34	38	41	46	50	55	61	67	74	81	89	834
3	Local architecture and technology conservation																					
	<ul style="list-style-type: none"> Detail study of heritage Detail study of heritage Study of building technology Study of building materials Conservation guidelines 	0	0	0	7	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	24
		0	0	0	0	15	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	46
		0	0	0	0	15	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	46
		0	0	0	0	15	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	46
		0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	<ul style="list-style-type: none"> Incentive packages in conservation Model building and public 	10	11	12	13	15	16	18	19	21	24	26	29	31	35	38	42	46	51	56	61	573
		15	17	18	20	22	24	27	29	32	35	39	43	47	52	57	63	69	76	83	92	859

S. No.	Major programme	Annual Investment Requirement Rs. in Lakh																				Total
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
4	awareness																					
	Use of innovative technology and materials																					
	Periodic study	2	0	2	0	3	0	4	0	4	0	5	0	6	0	8	0	9	0	11	0	54
	▪ Sustainable building technology guidelines																					
	▪ Relevant assessment	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5	▪ Application and public awareness	2	0	2	0	3	0	4	0	4	0	5	0	6	0	8	0	9	0	11	0	54
		5	6	6	7	7	8	9	10	11	12	13	14	16	17	19	21	23	25	28	30	284
	Building maintenance programme																					
	Building maintenance guidelines	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	21	0	0	0	0	29
	Listing of buildings	0	0	0	20	0	0	0	0	32	0	0	0	0	52	0	0	0	0	28	0	132
	Maintenance plan	0	0	0	0	9	0	0	0	0	14	0	0	0	0	23	0	0	0	0	12	58
	Plan implementation	3530	3883	4271	4698	5168	5685	6254	6879	7567	8324	9607	10568	11624	12787	14066	15472	17019	18721	20593	22653	209370
6	New building construction	3745	4120	4531	4985	5483	6031	6634	7298	8028	8831	9714	10685	11753	12929	14222	15644	17208	18929	20822	22904	214495

S. No.	Major programme	Annual Investment Requirement Rs. in Lakh																				Total
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
7	Quality assurance																					
	▪ Study of present condition	2	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	7
	▪ Establishment of laboratory	0	100	0	0	0	0	0	0	0	0	0	286	0	0	0	0	0	0	0	0	386
	▪ Establishment of laboratory	0	0	12	0	15	0	18	0	21	0	26	0	31	0	38	0	46	0	56	61	324
	▪ Quality level standard	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	▪ Implementation and monitoring	10	11	12	13	15	16	18	19	21	24	26	29	31	35	38	42	46	51	56	61	573
8	Government building programme																					
	▪ Standard and guidelines	0	0	2	0	3	0	4	0	4	0	5	0	6	0	8	0	9	0	11	12	64
	▪ Standard and guidelines	2	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	8
	▪ Evaluation standard/byelaw guidelines	0	2	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	8
	▪ Policy, bye laws	2	0	0	0	0	3	0	0	0	0	5	0	0	0	0	8	0	0	0	12	30

S. No.	Major programme	Annual Investment Requirement Rs. in Lakh																				Total
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
9	guidelines																					
	▪ Priority investment projects	2	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	7
	Financial management																					
	▪ Possibility of investment	2	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	8
	▪ Institutional study	0	2	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	8
	▪ Joint venture/Partnership of public and private {																					
	▪ Investment policy and implementation	2	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	7
	▪ Capacity enhancement	0	0	4	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	13
		0	11	0	15	0	16	0	20	0	24	0	29	0	35	0	42	0	51	0	62	305
		0																				
10	Institutional capacity development																					
	▪ Institutional study	0	0	0	0	3	0	0	0	0	0	5	0	0	0	0	0	9	0	0	0	17
	▪ Updating the building policy	2	0	0	0	0	0	4	0	0	0	0	0	0	7	0	0	0	0	0	0	13
	▪ Facilities study	0	0	0	3	0	0	0	0	0	5	0	0	0	0	0	8	0	0	0	0	16
	▪ Capacity enhancement of the	20	22	24	27	29	32	35	39	43	47	52	57	63	69	76	84	92	101	111	122	1145

S. No.	Major programme	Annual Investment Requirement Rs. in Lakh																				Total
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	
	experts																					
	▪ Technicians/artisans training	50	55	61	67	73	81	89	97	107	118	130	143	157	173	190	209	230	253	278	306	2864
	▪ Insurance policy and implementation	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	▪ Insurance policy and implementation	0	2	0	0	0	0	0	4	0	0	0	0	0	0	8	0	0	0	0	0	14
	▪ Monitoring and evaluation	30	33	36	40	44	48	53	58	64	71	78	86	94	104	114	125	138	152	167	183	1718
	Total	809	8810	9691	10660	11726	12899	14188	15607	17168	18885	20773	22851	25136	27649	30414	33456	36801	40481	44529	48982	466362

D) Financial instrument for the implementation of the plans and programmes

There are many other sectors who are also making investment significantly in the building related activities besides the annual allocation of budget to building sector under the annual programmes and periodic plans therefore this study will be incomplete until those investments are properly studied and analyzed apart from the investment being made by Department of Urban Development and Building Construction (DUDBC). Thus an attempt has been made in this study to include all the investments by the private individuals, investment by the other government offices besides DUDBC, businessmen who import construction materials from different countries, industrialist who produce construction materials, private organized sector etc. This kind of analysis has been taken as an important basis to identify potential sources and agencies to mobilize necessary resources for the Three Year detail plans and programmes as well as 20 years long strategic plans and programmes as presented in this business plan from this analysis.

Before analyzing the necessary resources for the development of the building sector in Nepal, it is necessary to describe about different actors who are making investment in the building sector. It is estimated that there are about 65 lakhs buildings used for the residential and other purposes according to National Building Policy (Draft). The construction and maintenance of these buildings are mostly being done by: 1) Government of Nepal (including the corporation under the government ownership), 2) private sector (organized sector including individuals and families), 3) Non Governmental Organizations (religious organizations including INGOs). The budget required for the construction and maintenance of the government buildings and corporation buildings owned by the government is allocated by the government through the Ministry of Finance (MoF) to these offices. The budget for the government buildings (central, district level) under rent is also provided by MoF. Similarly, in the case of private sector, whether it is organized or private or families whatever it may be, the resources required for the construction and maintenance of the buildings is mobilized by themselves. For this, the private individuals and organized sector both approach the banks and financial institutions for the necessary loans. The NGOs and INGOs under the third category, also manage and mobilize the required resources for the construction and maintenance of the buildings by mobilizing their own resources. Community and religious organizations /associations generally do not have income of their own so they depend on donors for the construction of their buildings and usually request the government for providing public land

for the construction of their building. For instance, Government of Nepal has recently made available land for the construction of building for Paropkar Orphan Organization in Duwakot, Bhaktapur.

Most of the central, zonal and district level government offices are staying in the rental buildings for their offices due to lack of their own buildings of and the number of quarters necessary the employees residence is almost negligible up till now. Therefore, government needs to allocate budget for these rental office buildings and quarters in the coming few years also. Moreover, for those offices having their own buildings the additional budget will have to be allocated for the extension and maintenance of their buildings therefore it is clear that government will have to make huge investment compulsorily in the building sector in the coming few years. In addition to this, government will have to allocate adequate resources for the regular repair and maintenance of the existing government buildings. From the present estimates, there are about 1.5 lakhs public agencies which means the size of the maintenance budget would be quite big which is quite understandable.

In the following tables, the investment required for the implementation of this business plan, present trends, potential sources etc. are presented.

Table 42 Trend analysis as per programme booklet for the Fiscal Year 2068/69 BS

Programme	Annual budget (actual/projected) Rs.in 000				Quantity, Number	
	2067/68	2068/69	2069/70	2070/71	Construction	Maintenance
Department div. offices	172971	186900	224539	260155		400
Special buildings	155180	146306	144127	153647		
Special physical infrastructure	51105	64798	66330	69318	37	412
Singha Durbar development	56163	72140	62690	53680	2	
Building code and construction	83357	119050	229533	282535	17	3 (Retrofitting)
Building sector total	518776	589194	727219	819335	56	815
Overall housing, building and urban development sector	2559423	4335589	5387941	6656410	-	-

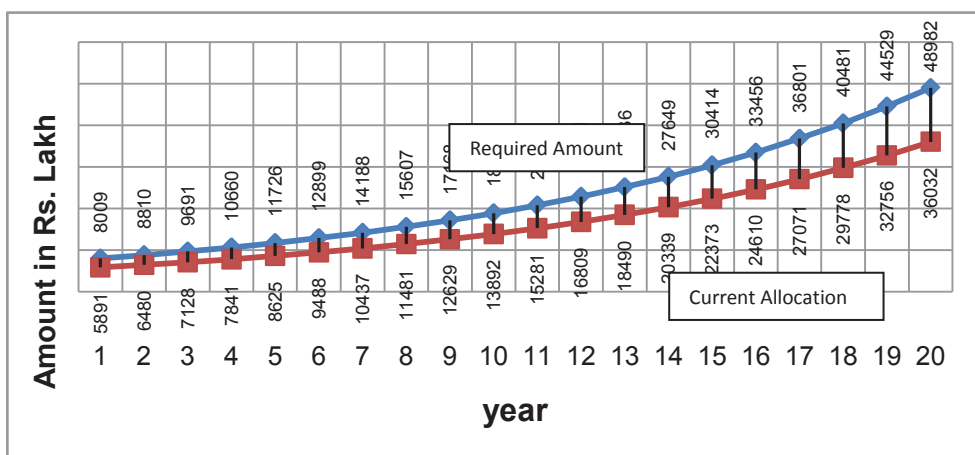


Figure 10 Comparison of investment requirement and allocation of budget

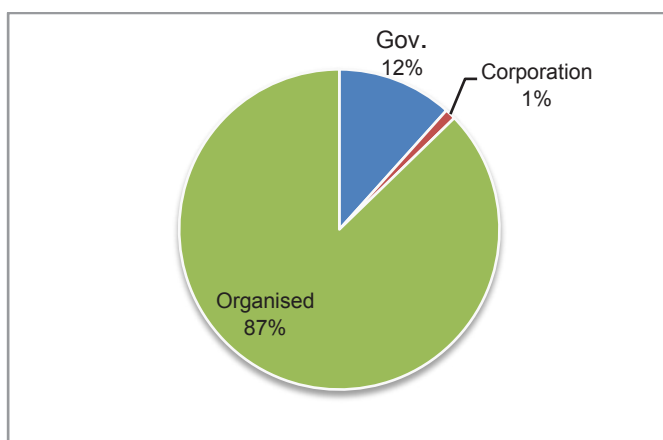


Figure 11 Share of investment

The existing investment sources for the purchase of land, expenditure for the rent, building construction and maintenance etc. for different types of buildings.

Government of Nepal Ministry of Finance: The budget required for the construction and maintenance of the buildings, budget for the payment of rent for all the government buildings and government owned corporation is being allocated to the concerned offices through the Ministry of Finance, Government of Nepal and this trend or the practice is likely to remain intact even in the future.

Other corporation and offices: The other corporation and offices are bearing the cost for the construction of new buildings and maintenance of the existing buildings by themselves.

Banks and financial institutions: The purchase of land as per need, construction of new buildings and maintenance including the payment of rent etc. are bearing by their own resources themselves and this practice is likely to remain intact even in the future.

Nongovernmental Organizations (NGOs): Most of the national level non governmental organizations (NGOs) are implementing their programmes with the financial support of the international donor organization and agencies in one way or the other therefore the required resources for the construction of the buildings is also mostly come from the same sources and most of the NGOs are in rental houses for their office and some NGOs are requesting for the land to the government of Nepal too.

Philanthropic social organizations/associations: Naturally due to their involvement in religious and social works, they are dependent entirely on the donations provided by the donors for the construction and maintenance of the buildings. Generally, they approach to the government to make available the government land under the government ownership for the construction of their buildings.

International missions and agencies: These missions and agencies mobilize the required resources for the purchase of land, construction and maintenance of the buildings as well as for the payment of rent by themselves and this practice is likely to remain intact even in the future.

Individual private buildings: The share of individual private buildings construction is the largest in Nepal therefore this sector is making a huge investment annually in the purchase of land and construction and maintenance of the buildings. This practice is likely to remain intact even in the future.

Note: Some government buildings are constructed with the financial support of the donor countries and agencies also.

Identification of the possible sources and their mobilization

As mentioned above, the investment necessary for different types of buildings such as government buildings, banks and financial institutions buildings, organized sector buildings, NGO buildings will be made by the concerned offices in the future also. Owing to lack of resources, Government of Nepal is not in a position to allocate necessary budget for the construction of buildings for all the government offices even if it desires so. The construction of quarters necessary for the residence of the employees is still not a priority issue on the part of the government therefore it is clear that government will face the greatest problem of investment or the resources when the issue of constructing buildings is raised. There is no short cut and easy way to address and solve this challenge of investment however, the following potential sources could be explored for the mobilization of the required resources. This type of potential sources could also be used for other different offices by developing and managing appropriate financial instrument by the Government of Nepal.

1) Internal loan

Employees Provident Fund

The Employees Provident Fund is currently investing about 1 per cent of its total investment in buildings construction and housing sector and the fund has adequate idle capital for investment therefore, fund could be one of the important and reliable and dependable source for the mobilization of the resources necessary for the development of the building sector. But for this, necessary efforts will have to be made by the concerned agencies of the government.

Banks and financial institutions: Although banks and financial institutions are making huge investment in housing and real estate sector but they have not made invested much in building construction sector. There is a great possibility to attract these banks and financial institutions in the building sector as there are limited areas for investments for them now and deposit is growing day by day. This type of arrangement would be beneficial not only to government but other organizations and agencies.

Remittance: Remittance is on the increase and there is a significant role of remittance in the economy of Nepal. The substantial part of remittance money thus received at individual and family level is invested in land and housing at

present .Therefore, there is a great possibility for mobilizing necessary resources for the building sector from this remittance if the government develops and manages the appropriate financial instrument.

Employees Welfare Fund: There is an adequate resources in the welfare fund of many agencies including the Nepal Police and Nepal Army according to news from different media therefore at least part of such fund is utilized for the construction of their own office buildings and quarters meant for their own employees it will provide a great relief to MoF. The saving thus realized could be used for the construction of buildings and quarters of other offices.

2) Non Resident Nepali

The NRN is showing great interest in the development and construction activities both at the individual and institutional level therefore the possibility of mobilizing the NRN for the necessary resources for the construction of the buildings particularly government buildings and the buildings of the charitable organizations like Paropkar Orphan organization and social facilities related agencies cannot be underestimated and undermined in this context.

3) Bond Issue

The bond can be issued for the mobilization of the required resources with fixed interest rate and time for the construction of the buildings particularly that of the government buildings and employees quarters through some financial institutions. There are many examples where the government has issued the bonds to raise the necessary capital in the past. Thus, it is desirable to consider this option also in order to address the challenge of investment by the government.

4) Building Construction Development Fund

A thought can be given towards the creation of national level permanent Building Construction Development Fund for the construction and maintenance of buildings and employees quarters of different agencies including the government. The necessary resources for the fund can be mobilized through issuance of shares including the use of appropriate financial instruments.

Table 43 Potential sources to fulfill the deficit

S.No.	Source	Amount required for the 20 years period Rs.in Crores	Annual average Rs. in Crores
1	Internal loan		
	Employees Provident Fund	100	5
	Bank and financial institutions	200	10
	Employees Welfare Fund	100	5
2	Association of Non Resident Nepali (NRN)	100	5
4	Bond or Bachat Patra	400	20
5	International donor agencies	389	19.5
	Total	1289	64.5

It is very difficult to get investment plan of the NGOs though they implement plan by preparing long term plan, medium term plan and annual plans and programmes as per their goals, objectives and mandate in the context of investment in the building sector from other institutional agencies. But in order to avoid duplication in the programmes and to use the resources efficiently it is necessary to implement programmes in an integrated manner as far as possible.

5. INSTITUTIONAL ARRANGEMENT

A) Institutional Development

Housing Sector

The analysis of requirement of human resources and its pervasiveness involved in the housing sector is not possible without the lack of information system in the regulating agencies. The major actors in the housing sector are the citizens themselves who build and consume the housing services and each household is involved in the mobilization of resources for the construction and maintenance of the housing therefore in this sense all the families are the available human resources in the housing sector. Looking from this perspective, there will never be shortage of human resources in the housing. However, it would be appropriate to identify sectoral human resources only those individuals who are directly related with technology and skills and contribute directly towards making housing construction cost effective, organized and qualitative.

It can be said that there is adequate availability of medium level manpower in the architecture and civil engineering subjects in different places for the construction of the housing units at individual level. The CTEVT is producing SLC level technical manpower in adequate number as well as in particular lately certificate level of this subject is taught in different cities.

There is no deficiency of technical manpower in the construction of the housing at private or other institutional sector at present. Therefore, in the context of the analysis of the availability of human resources in the housing sector, the human resources necessary only for the government and corporation sector is included.

Department of Urban Development and Building Construction is the only remaining government agency working in the field of the housing sector as Kathmandu Valley Town Development Committee which was previously a government office has been recently converted into a corporation as Kathmandu Valley Authority (KVA). As a corporation besides KVA, there is Rural Housing Company (proposed as National Housing Company) and National Housing Bank as proposed by this business plan working in the housing sector.

The study of the provision of existing manpower to shoulder the volume of works in housing in the government sector clearly allocated for the housing sector in DUDBC shows that there is one Housing Section and one Housing

Division and the manpower involved indicates that there is one Gazetted First Class, as Division Chief and under this there is Housing Section where there is one Section Chief and some architect and engineers (the total manpower for this section is not specifically mentioned). Even other sections under the Housing Division is not related to housing but works as planning, monitoring and foreign aid sections. There is no housing section in the division offices under the department and no manpower is allocated categorically for the housing only. However, these divisions offices are also undertaking the works of the housing sector besides building and urban developments works therefore by assuming the manpower assigned to the division offices also works for the housing sector indirectly then the manpower in the housing appears like the following:

Table 44 Description of the existing manpower only for the housing sector

Agency	Gaz. 1st	Gaz. 2ndst	Gaz. 3rd	Non Gaz. 1st	Total	Remarks
Department of Urban Development and Building Construction	1 (0)	1 (2)	2 (0)	0	4 (2)	Indirectly related manpower is shown in the bracket
A Division Office	1 (3)	0 (4)	0 (8)	0 (16)	1 (31)	
B Division Office	0	0 (15)	0 (15)	0 (15)	0 (45)	
C Division Office	0	0 (5)	0 (5)	0 (10)	0 (20)	
Total	2 (3)	1 (26)	2 (28)	0 (41)	5 (98)	

For the purpose of this table among the A Class Division Offices, the Division Chief of Kathmandu Division Office has been taken as directly related to housing as this office is undertaking the works of regulation and approval relating to housing as there is separate agency working for the building sector like Building Construction Maintenance Division.

Based on the present budgetary allocation and the volume of the proposed necessary investment in the housing sector, the volume of works under the government sector is going to be almost doubled therefore it is indispensable to increase in the existing manpower. The division office in the convenient areas can cover more than one district however in the remote places much time is taken for travel to and from such offices to district head quarter therefore in order to address the geographical pervasiveness it would be appropriate to make the provision of one Senior Divisional Engineer, one to two engineers as per the remoteness of the district, and under the engineer

there should be minimum two sub-engineers in each district just for housing sector activities only. According to this analysis, for the implementation of this proposed business plan there is a need of 360 different level technical manpower categorically mentioned for the works relating to the housing sector.

Table 45 Description of additional technical manpower necessary only for the housing sector

Description of manpower	Gaz.1st	Gaz.2nd	Gaz.3rd	NonGaz.1st	Total
According to presently approved manpower(Darbandi)	2	1	2	0	5
Required additional manpower	3	74	93	190	360
Total	5	75	95	190	365

Among this manpower, the manpower currently working indirectly in the housing could be used in the housing sector then there will be a reduction of 98 number of manpower thereby requiring only 262 technical manpower in total.

It is also recommended to make necessary arrangement for the mobilization of the proposed budget and programmes for the capacity enhancement of this training centre from this centre itself by developing the existing Building Technology Research and Training Centre(BTRTC) by developing this centre as a centre involved in housing related activities in particular, the construction of low cost model house and demonstration, conducting research, study and test of economical and cost effective construction materials, and providing training on these subjects by making minor changes in the organizational structure of the department to enhance the area of jurisdiction of present Building Technology Research and Training Centre(BTRTC).

Building Sector

In the case of the corporations, the total investment required for the construction and maintenance of the buildings is Rs.19 crores and 7 crores respectively which is comparatively low therefore the capacity could be enhanced just by imparting training to the existing manpower. Different organized sector which are supposed to invest Rs.21 Arba annually according to base year price and though they maintain expert service internally in a limited manner, basically there is a practice of getting the services of the consultants for the technical services through the outsourcing process by the organized sector.

There is a very negligible involvement of the medium and high level experts because about 90 per cent of such houses are constructed through the advice of the local technicians as per the information of the department in the construction of those buildings. Compared to the existing technical manpower of the government instrument, the technical manpower available in the market is comparatively more therefore there is no need of producing additional expert manpower for the construction of the private buildings. But in technical manpower there is a dearth of experts and technicians who has adequate and in depth knowledge about the building code and who really internalize it faithfully in their consultancy works is worth considering in this context. In this regard, there is a need of imparting adequate compulsory training to the private consultants providing consultancy services and high and medium level technicians involved in the design and construction outside the government service. Similarly, there is no shortage of the technicians up till now only for the construction of the buildings as these types of manpower is mostly mobilized by the private house owners and then after by the contractors in the case of the technicians involved in the building sector. However, there is a need of implementing wide level training programme in order to transfer the skills of constructing earthquake resistant buildings for them as well.

The comparison between the volume of activities expected to be formulated and implemented by Department of Urban Development and Building Construction under its annual programme including the other committees for the proposed programmes in the government sector and proposed volume of works is presented respectively in the following table while analyzing the existing technical manpower available in the government organization in the present condition.

Table 46 Comparative studybetween the proposed plan and present trends

S/ N	Relevant point of the major programmes	Annual average quantity of building sector				
		Unit	Proposed	Present trend	Required amount	Budget of the base year
1	Building construction	No.	200	56	800900	589194
2	Building maintenance	No.	4762	812		
3	Building retrofitting	No.	70	3		
4	Study works and Regulations	Works	7	12		
5	Expert training programme	No	2	1		
6	Mason training programme	No	25	10		
7	Incentive packages / public awareness	Works	3	1		
8	Establishment of laboratory and capacity development	No	3	0		
9	Monitoring/evaluation and other works	Works	1	1		

The comparative study of the existing manpower based on the real figures presented in the Table above assigned to handle the works in the government sector, in particular only in the building sector of the Department of Urban Development and Building Construction indicates that there may be an increase in the volume of works particularly in the major works such as in construction by 3.6 times, in maintenance by 5.9 times and in retrofitting by 23.3 times and the size of the budget will also increase by 1.36 times and the manpower approved for the implementation of less than total budget of Rs.1 Arba and therefore the total manpower currently involved to handle the budget up to Rs.2.5 Arba under housing, building and urban development sector on the whole cannot be considered adequate to implement the programmes amounting to proposed Rs.1.45 Arba only in the building sector.

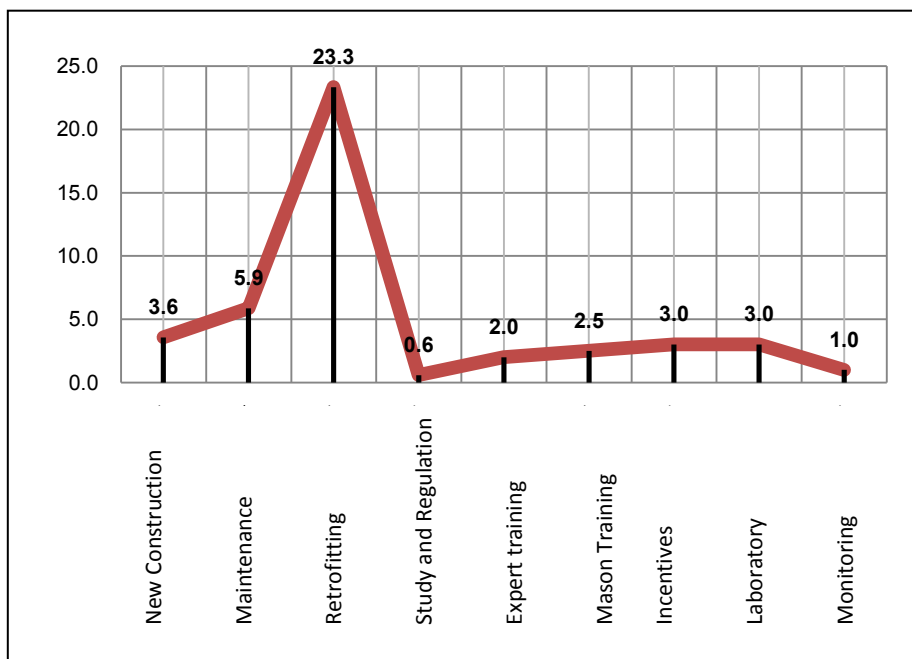


Figure 12 Ratio of increment in the volume of works

The size of the separate manpower arrangement assigned only for the building sector in Department of Urban Development and Building Construction is as follows.

Table 47 Description of existing manpower only for the building sector

Agency	Gaz. 1 st	Gaz. 2 nd	Gaz. 3 rd	Non Gaz. 1 st	Non Gaz. 4 th	Total
Department of Urban Development and Building Construction	1	5				6
A-Class Division Offices		4	4	8		16
B-Class Division Offices		15	15	31		61
C-Class Division Offices		5	5	14		24
Building Maintenance Division	1	2	5	16	2	26
Building Technology Research and Training Centre	1	1	3	3		8
Total	3	32	32	72	2	141

It is indispensable to expand the jurisdiction of the divisional offices to implement still more development programmes in the remote regions according to the concept of the balanced national development based on the proposed programmes. The division offices located in the convenient places can handle more than two districts but this principle could not be result oriented in remote districts. There should be a provision of at least one Senior Divisional Engineer only to look after the works of the building sector in each district taking into consideration the vast geographical coverage and local remoteness, one to two engineers based on the vast geographical coverage and remoteness and at least two sub-engineers under each engineer. According to this analysis, there is the need of the following additional 224 different level technical manpower for the implementation of the proposed business plan.

Table 48 Additional technical manpower required only for the building sector

Description of manpower	Gaz. 1st	Gaz. 2nd	Gaz. 3rd	Non Gaz. 1st	NonGaz .4th	Total
As per approved positions (<i>darbandi</i>)	3	32	32	72	2	141
Additional manpower required		43	63	118		224
Total	3	75	95	190	2	365

Urban Development Sector

Roles and Responsibility of Urban Development Division of DUDBC

Vision: Sustainable urban development

Objective: Promote sustainable urban development and urban rural linkages through development of modern physical facilities and conservation of cultural, religious, and historical heritage sites

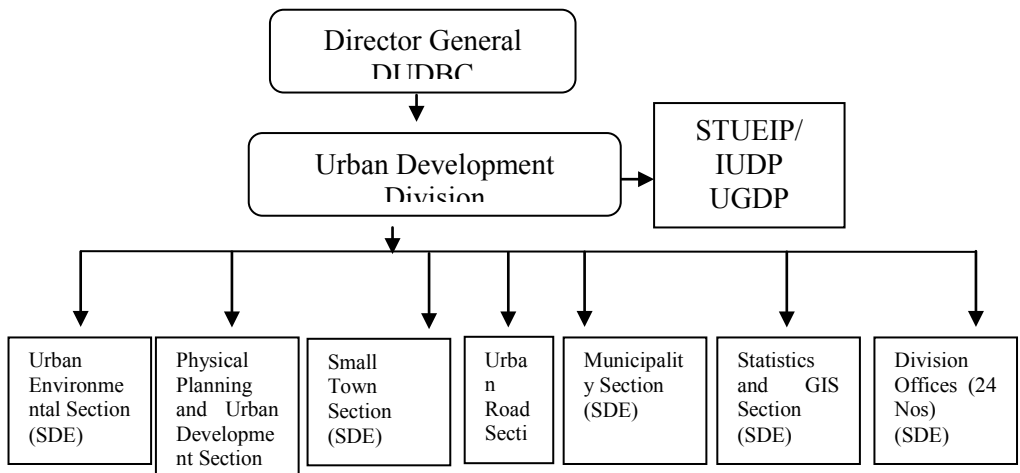
Major Roles and Responsibilities:

- Preparation and Implementation of Development Plans
 - Physical Development Plan
 - Periodic Plan
 - Integrated Development Plan
 - Long Term Development Plan
 - Urban environment related program
- Mapping and Data base preparation
 - Municipal Base Map
 - Land Use Map
- Management of Urban Development Project
 - Urban and environment Improvement Project
 - Urban Governance Development Project
 - Integrated Urban Development Project
 - New Town Development Project
 - Secondary Town Integrated Urban Environment Improvement Project
- Project Preparation and Proposal Writing for Donor Agencies
- Small Town and Market Centre Planning and Implementation
- Urban Infrastructure Planning and Construction
- Land Development

- Land Pooling
- GLD
- Human Resource Support and capacity building (man power supply)
 - Trainings
 - Technical personnel deputation to Municipality, TDCs
- Cultural and Historical site conservation and planning
- Advocate in ministry for contemporary policy, acts and strategies

The urban development activities around the nation have been implemented 25 local division offices and supported 5 sections headed by senior divisional engineer (2nd class gazetted officer) at central level and supervised by urban planning division headed by DDG in the DUDBC. One division office in general covers around 3 districts in general.

Existing Institutional arrangement of Urban Development Division of DUDBC



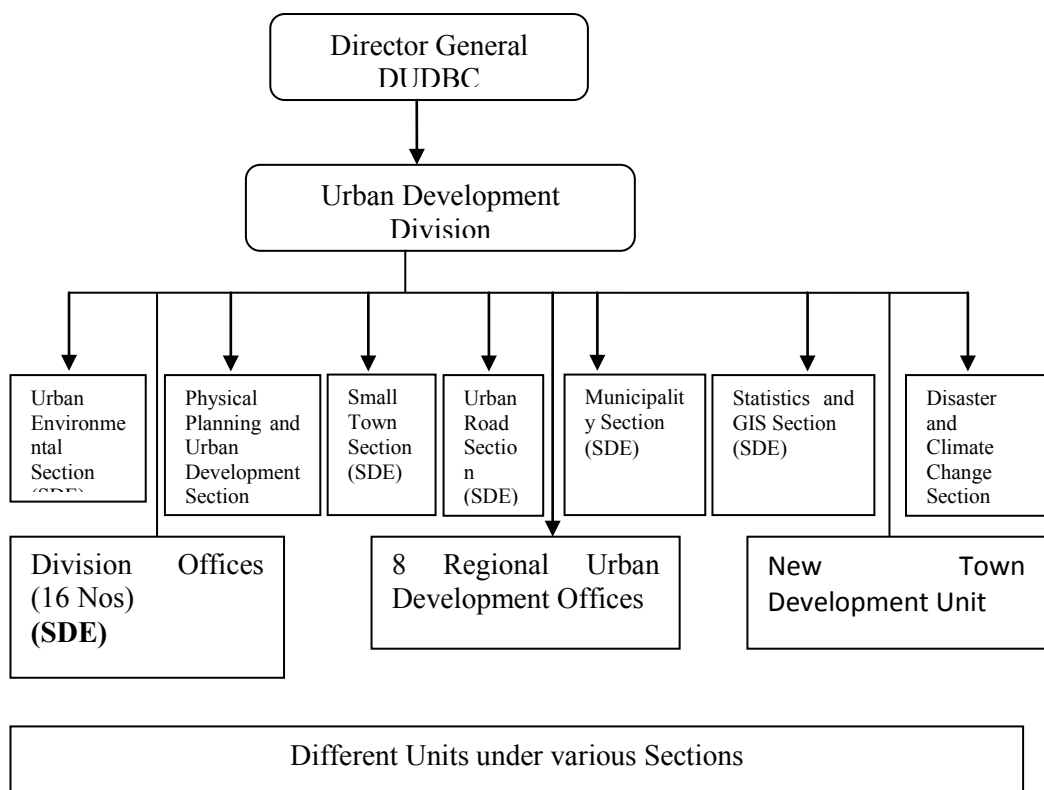
The existing strategic programs and the sections of Urban Development Division shows that there are clear division of work between sections, there are new emerging issues like climate change, new township development etc which are assigned to specific sections. The urban development has becoming priority sector and similarly the annual budgets have been increasing. The

institutional arrangement should be made flexible to accommodate the new emerging issues. in this context some new units have been proposed and new institutional framework has been proposed to implement this business plan.

Considering the national and international context, new section like disaster risk reduction section has been proposed to deal with urban ecology. Similarly, the new opportunity and challenges have emerged to streamline and develop new urban areas along major corridors. Project Design and Appraisal and Research on Urban Issues needs inter sectional team or concerned section to carry out the activities depending upon the nature of project appraisal and research. Human Resource Development, capacity development, project appraisal and research on urban issues are cross cutting issues and will be carried out by concerned unit in the department.

Division offices at local level are highly under-staffed as they have to cover large geographic area and other activities like housing and building construction. The division offices are least involved in urban development issues and programs as their priorities are building construction and housing. This reflects in the perception of people as they term the division office as office of Building Construction.

Proposed Institutional Development



B) Human resources development

Housing sector:

It may not be required to recruit the permanent type of employees for the fulfilment of the manpower necessary in the housing sector as explained in detail in the above section. The expected works could have been done from the outside manpower also to make the civil service resulted oriented, economical and efficient. There will be no liabilities to the government of making available the pension until the death of the employees by creating the additional liabilities of new 262 employees as shown above in the civil service with this approach. The service contract for the necessary manpower could be the most practical measure in this regard and alternatively locally available consultancy services could also be procured. It would be best to mobilize the medium and high level technical manpower produced locally as far as possible during the process of the service contract from the point of

view of conserving and promoting local technology, architecture and construction materials.

In the case of the technicians involved in the construction works of housing, there is no shortage of the technicians until only for the construction of the buildings as these types of manpower are mostly mobilized by the private house owners and then after by the contractors therefore there is no need of a programme relating to producing additional technicians immediately. However, in the context of the lack of technicians having adequate knowledge of building code and accordingly can provide advice to construct the building as per National Building Code in order to ensure the safe housing construction, it would be appropriate to produce qualified technicians manpower by implementing training massively on building code assigning special priority in the areas where the quantitative weightage of construction of new residential houses are comparatively high.

Building sector:

It may not be required to recruit the permanent type of employees for the fulfilment of the manpower necessary in the building sector as explained in detail in the above section. The expected works could have been done from the outside manpower also to make the civil service result oriented, economical and efficient. There will be no liabilities to the government of making available the pension until the death of the employees by creating the additional liabilities of new 224 employees as shown above in the civil service with this approach. The service contract for the necessary manpower could be the most practical measure in this regard and alternatively locally available consultancy services could also be procured. It would be best to mobilize the medium and high level technical manpower produced locally as far as possible during the process of the service contract from the point of view of conserving and promoting local technology, architecture and construction materials.

In the case of the technicians involved in the construction works of building, there is no shortage of the technicians up till only for the construction of the buildings as these types of manpower are mostly mobilized by the private house owners and then after by the contractors therefore there is no need of a programme relating to producing additional technicians immediately. However, in the context of the lack of technicians having adequate knowledge of building code and accordingly can provide advice to construct the building

as per National Building Code in order to ensure the safe building construction, it would be appropriate to produce qualified technicians manpower by implementing training massively on building code assigning special priority in the areas where the quantitative weightage of construction of new buildings are comparatively high. For the full compliance and effective implementation of the building code, the provision of mandatory involvement of the trained technicians during the process of issuing building permit can be made once there is adequate availability of such manpower.

There is a situation of depending upon external manpower mostly the technicians coming from India due to the non adequacy of the local manpower related to particularly for building service and facilities, though there is adequate supply of technicians level of manpower for the construction of buildings. There is no adequate supply of local manpower for water supply and sanitation and electricity related works. It is indispensable to implement adequate trainings of this sector as per local needs in this regard.

Urban Development Sector

Development of Human Resource in urban development sector

Human resource will be developed through:

- Appropriate training manuals and guidelines will be developed as per need for training junior level officers and field level staffs.
- Refresher training will be conducted for training senior level officers.
- Workshop and Seminars should be conducted at central and regional level to disseminate knowledge about emerging trends and issues
- On the whole, in order to ensure the placement of capable and appropriate person as per qualification and responsibilities of the post in the context of human resource development in housing, building and urban development sector, the existing building and architecture sub group needs to be made practical and for this there is a need to constitute separate sub group under building(civil), architecture and urban development.

C) Budget Requirement for the institutional and human resources management

The budget necessary only for the housing building and urban development is as follows:

Housing sector:

There is a need of Rs.40 Lakhs for the implementation of legal structure development, housing technology development and institutional development plan, in the base year and for the overall 20 years period there will be a need of total Rs.2400 Lakhs. There will be a need of total Rs.7248 in 20 years period under the housing sector for the establishment of National Housing Bank and operation including the investment necessary from the corporation sector.

Building sector:

There will be a need of Rs.102 Lakhs in the base year for the capacity enhancement of the organization by implementing the programmes like monitoring and evaluation, legal updating, building insurance policy and implementation, training of technicians, capacity enhancement of the experts, study of facilities and services, updating of building policy, and institutional and management study under this sector and for the 20 years period there will be a need of total Rs.5789 Lakhs.

Urban development sector:

On the whole as the sectoral business plan is entirely concentrated in the development and construction of urban infrastructures and assuming this subject will be included in the cost estimates of the programmes for the institutional development and human resources management therefore the separate budget has not been proposed.

D) Legal and policy Arrangement

Housing sector:

The following activities needs to be given priority towards the implementation of this plan for the production of safe and cost effective housing by regulation, management and facilitation of this sector:

- It has become necessary to control the tendency of allowing to construct or approve building plan contrary to the National Building Code and bye laws although the authorities to formulate different bye laws relating to housing has been given to town development committees and local authorities and to assign the responsibility of monitoring and evaluation for its regulation to Department of Urban Development and Building Construction and agencies under it and accordingly to update Town Development Act and Building Act to enable the Ministry of Urban Development to punish concerned those individuals and authorities based on the report received.
- To prepare legal instrument including the provision to punish if somebody violates or breach this as no individual or the agencies including the government is not allowed to construct the housing or the plotting of the land without getting proper approval for apartment or group housing construction and land development.
- To implement the proposed bill relating to commercial land and housing business as soon as possible.
- Timely updating of the present apartment act and regulations.
- To make an arrangement for the involvement only of those experts having such qualification and experience by determining educational qualification and experience of different experts involved in the housing related works.
- To institutionalize the process of minimizing the risk by insuring the residential buildings.
- To make an arrangement of restricting in the use of building for health, education and other purposes by changing in its use once the permit is taken for the residential use.
- To implement land use plan restricting in the use of non residential and other activities in the residential areas.

Building sector:

The following activities needs to be given priority towards the implementation of this plan to make building safe and cost effective as well as for the construction, repair and maintenance of this sector.

To assign the responsibility of monitoring, evaluation and regulation of compliance to different codes, guidelines, bye laws etc relating to building construction to Department of Urban Development and Building Construction at the central level and the concerned municipality and VDC at the local level. The

division offices of the department will make available necessary technical support to local authorities in this regard:

- To put restriction on the construction of any building without building permit including the government buildings by making the procedures of approval for building construction simple and effective.
- To implement gradually to involve at least one trained technician having completed training on earthquake resistant building construction from the licensed training institution imparting such training to ensure the safe building construction in any construction of building works.
- To make an arrangement by determining educational qualification and experience of different experts involved in the building sector for involvement only of those experts having such qualification and experience in design and construction of the building.
- To institutionalize the process of minimizing the risk by insuring the buildings.
- To implement with necessary improvements/updating and amendments by reviewing the existing legal instruments for mandatory compliance of building policy by formulating different codes, guidelines, bye laws, norms and specification etc. as the jurisdiction of the existing building act and regulation is limited and inadequate for the implementation of this policy.
- To make punishable such acts which haphazardly make changes in the use without permission and if there is a need to make change in mentioned use of building during the time of approval of plan, the local authority can issue such permit if it is appropriate after conducting the Vulnerability Assessment of the building.
- The FM or mobile towers cannot be installed above the building unless it is proved appropriate from the point of view of the safety of the building.

Urban Development sector :

- TDC Act and guidelines has to be revisited and amended as per the need of the day
- Building Bye Laws and regulations should be reviewed and amended
- Land Development Act formulation and Modification of Land Development Manual
- National Urban Policy has to be further modified and implemented
- The policy guidelines on projects implemented and operated by the Users Committees, will be modified to mobilize increased participation of the users groups.
- Formulation of Physical Development Act and Guidelines
- Completion of Planning Norms and Standards, 2013
- Updating Periodic Plan Guidelines
- Identify stake holder and their SWOT analysis.