Impact of Infrastructure Development on Society:

(A Case Study of Narayan Municipality Ward No. 1, Dailekh)

A Thesis

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By

Bikram Shahi

Exam Roll No: 281391

T.U Registration No: 6-2-55-809-2004

Central Department of Rural Development

Faculty of Humanities & Social Sciences

Tribhuvan University

Kathmandu, Nepal

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TRIBHUVAN UNIVERSITY
त्रिभुवन विश्वविद्यालय
CENTRAL DEPARTMENT OF RURAL DEVELOPMENT
ग्रामीण विकास केन्द्रीय विभाग

विभागीय प्रमुखको कार्यालय
कीर्तिपुर, काठमाडौं, नेपाल ।
Office of the Head of Department
Kirtipur, Kathmandu, Nepal.

Ref. No. :.....

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RECOMMENDATION LETTER

This thesis entitled **Impact of Infrastructure Development on Society: A Case Study of the Narayan Municipality ward No. 1, Dailekh district** is prepared by **Mr. Bikram Shahi** under my guidance and supervision. I forward this thesis to the evaluation committee for its final evaluation and approval.

_____

(Mr. Madhab P. Bhusal)
Supervisor and Lecturer

Date: 2012-09-02 (A.D.)
2069-05-17 (B.S)

E-mail : ruraldept@gmail.com, Tel.: 977-1- 4333581, 977-1- 4331383

TRIBHUVAN UNIVERSITY
त्रिभुवन विश्वविद्यालय
CENTRAL DEPARTMENT OF RURAL DEVELOPMENT
ग्रामीण विकास केन्द्रीय विभाग

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Date मिति...20-05-2069.....

APPROVAL LETTER

This thesis entitled **Impact of Infrastructure Development on Society: A Case Study of the Narayan Municipality ward No. 1, Dailekh** district submitted by **Mr. Bikram Shahi** to the Central Department of Rural Development, Tribhuvan University, has been examined and approved by members of the Evaluation Committee.

Evaluation Committee

_____
(Dr. Uma Kant Silwal)
Head of the Department

_____
External Examiner

_____
(Mr. Madhab P. Bhusal
Supervisor

Date: 2012-09-05 (A.D)
2069-05-20 (B.S)

E-mail : ruraldept@gmail.com, Tel.: 977-1- 4333581, 977-1- 4331383

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ABSTRACT

The study Impact of the Infrastructure Development on society: A Case Study of Narayan Municipality, Dailekh is prepared with the objective to analyze the socio-economic impact of infrastructure development on the society and to examine the problem and prospect infrastructure development in the study area. The required information was collected from extensive field visit conducted in Narayan Municipality-1, Dailakh. Household survey, focus group discussion, Key informant interview, observation are the major techniques used for the field survey. Secondary information from the municipality, district profile and other sources were also used. Descriptive statistic is applied for the analysis of the data. Altogether 43 households of the ward 1 were taken for the sample from different tole using stratified sampling technique.

The total population of the selected sample household is 219 with 121 male and 98 female with 5.09 average household size, which is higher than the national average presented by population census 2011. Most of the people are found literate and only 6.87 percent people are engaged in agriculture.

The findings of the study have found that there is need to better facilities in the study area to promote the local resource utilization. Transportations is a genuine issue to increase in the local areas, people's status, changes in the social structure etc. It plays vital role in social upliftment together with communication adopted the new modal and scientific inventions, drinking water, micro-industry, household and electricity etc. The total agricultural household decrease substantially due to infrastructural development. The agriculture is also mostly commercialized and related to income generation due to the infrastructure development.

All the households have reported that infrastructural development is essential for the overall societal development. About 41.9 percent have put the transportation in the first essential infrastructure in the study area whereas they considered drinking water and electricity respectively in the second and third most priority infrastructure they need.

The study area has been facing different problems for infrastructural development. Increase event of flood, soil erosion, drought, insufficient budgeting, in cooperation from local people, corruption, rap, time expender in the nonproduction area and interest conflict of local people are some of the major problem in the study area.

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ABBREVIATIONs

ADB	Asian Development Bank
BCE	Before Common Era
CBS	Central Bureau of Statistics
CDMA	Code Division Multi Access
CDO	Chief District Officer
CSA	Civil Service Act
DC	Direct Circuit
DDC	District Development Committee
DO	Direct Observation
F	Female
FM	Frequency Modulation
GDP	Gross Domestic Product
GoN	Government of Nepal
GW	Gega Watt
Ha	Hector
HDR	Human Development Report
HHs	Households
INGOs	International Non Government Organization
IPPAN	Independent Power Producers Association Nepal
KLL	Key Information Interview
KM	Kilometer
LDM	Local Development of Ministry
LDO	Local Development Officer
LEP	Labor- based Environmental Participation
LRN	Local Road Network
LTD	Limited
M	Male
MD	Municipality Development

Chapter- One

INTRODUCTION

1.1. Background of the Study

Infrastructure is baseline for overall development of a region. It is structure or foundation of development before starting any types of activities. Infrastructure is also basic physical, organizational and geographical structure of the environment. Infrastructure development is needed for the operation of a society, human-natural interaction and socio-economic development. Infrastructure development bring change in society, transfer the natural structure, set new structure by replacing the old structure and eventually establishes the new modern facilities. It is used to change the social, economical, geographical and natural setting of an area. Infrastructure development and facilities are essential for production, distribution, exchange of good and services. Hence, for any region's overall development with an effective service delivery mechanism infrastructure plays a crucial role.

Infrastructure development is combination of two word ‘infra’ mean below ‘Structure’ mean form and development means to bring the change of structure. This French word mainly has been used in English science at least 1927. It means “subgrade" (the native material underneath a constructed pavement or railway). NATO has been used this word science 1940s and was then adopted by urban planner in its modern civilization (Oxford English Dictionary 1940). So infrastructure development means to bring the change social organizational, personal or natural into modern facilities.

Infrastructure development is mainly related of road, bridge, building, hydroelectric power generation, telecommunication network, transportation facilities and safe drinking water facilities etc. It has also included the building facilities such as public house, school, universities, hospitals, industry or shopping complex. It has also used the communication facilities such as mobiles, phone, Radio, News papers, Televisions and computers facilities. It can be generally defined as the set of interconnected structure elements that provide supporting frameworks an entire structure of development. It is important key for checking a country, District, place and regions development. The term refers to the structure that supports a society development, Such as transportations,

household, electricity, micro-industry, drinking water supplier's project and communication. It also refers the physical components of interrelated systems that provide commodities and services access to enable, sustains or reachable to the societal living conditions.

The modern infrastructure development in Nepal started during 1950s and until then Nepal had not infrastructure linkages to the rest of the world. Since then government has been making efforts to provide increase access to the transportation, communication access, safe drinking water suppliers, electricity access and other human need infrastructure services.

Nepal is a one of the poorest country in the world. Poverty reduce is a major challenge for Nepal. Poverty a one of the most reminds problem of Nepal to develop the basic infrastructure. Transportation plays of vital role in the overall development and socio-economic transformation on the country. It can be regarded that transportation infrastructure service is a backbone for an overall socio-economic development in Nepal followed by communication, which has great role in the overall increase the development and socio-economic linkages within country and country to the world. Communication services is and easy and effective instrument to diffuse the process of development and to aware and inform people about new innovation and idea.

Infrastructure development has been related with the society and nature. It exploits the environmental situation giving great benefit for society actives. Nepal is a rich country in the world in terms of water resources, but it can not yet be used for sufficient energy, drinking water, irrigation due to lack of ability to develop sufficient required infrastructure together with skill manpower, lack of investment and policy. As a result most of the population both in rural and urban area suffers from power shortage, water borne diseases, inadequate sanitation. Despite of this, government has set objectives to increase the access of water supply and sanitation services, and to continue raising the quality of drinking water with investment for maintenance, repair and construction of new projects.

Nepal is a natural scenic beautiful country in the world and it is play import role for developed the tourism sector. Tourism sector would have in generating employment, increasing foreign exchange earnings and maintaining external sector stability, it is crucial for Nepal to speedily develop. Tourism sector related with infrastructure because

infrastructure is main baseline people to people, people to place and core to periphery relation developed. It is interconnected with infrastructure development. Tourism sector also has a strong role play in economic, given the significant positive relationship between tourism and infrastructure. If any areas were to look at the increasing levels of urbanization which puts presser in the resource with urbanization put presser way of increased demands on physical infrastructure and urban services, the need for higher levels of investment in urban infrastructure (water supply and sanitation, solid waste management, education, healthcare facilities, urban transport and other urban amenities) is clearly evident. At present, around 50% of the urban population has access to water and sanitation services. This is targeted to increase to 100% by 2027.

According to the economic survey 2010/011 total length of road in Nepal is 12,455km. Total road out of the 6874km is blacktopped, 5036km is graveled and 9545km is earthen were constructed. There has been quantitative and qualitative increase in telecom services, daily new papers, TV transmission services, Radio broadcasting service and cable printing service in the country. The levels of investment would be further enhanced if the investment in urban areas is coupled with the need to provide similar facilities in scattered rural areas. Unlike hydro-power projects which have attracted substantial private sector interest for investment, urban infrastructure projects are almost entirely funded by Urban Local Bodies (ULBs) which are significantly cash-strapped and also unable to access finances from commercial banks and capital markets due to their poor financial condition.

Hence, financing of infrastructure projects across various sub-sectors from non-government sources would be a major challenge and would require a significant level of push and sustained support through investor-friendly

Until quite recently, municipalities has been formulated and implemented different types of infrastructure developed and services project in developing countries. With it have budget expender power, policy level power, decision making power and income generation power handed down from higher level of government to lower level . According to the municipalities survey report 2010, situation of the infrastructure development in the Narayan municipality total length of road is 117.63km, out of the 728m is blacktopped, 116km is graveled and 902m is earthen constructed. There has been increase the different types of communication facilities e.g. District post office 1, out of the total landline telephone distribution is 2048, CDMA is 700, prepaid is 19 , mobile

user people are 700, cyber center 3, 4 daily new paper and 4 FM radio services are available etc.

Narayan Municipality has been distribution the total number of 1300 tap for drinking water in this study area. Out of them 814 is distribution of public tap and out of the 486 are distributions of private tap. Out of 2529 household are using the electricity facilities. Social services facilities are situated in the study area for education service institutions are 26. out of the 4 are higher secondary school, 4 are pulse two level school, 4 are lower secondary school and some other are primary school and boarding school etc. in this area health services, housing and micro- industry program are also lunching.

Infrastructure development mainly aim are providing basic needs for local people and investment the minimum by the local people and society. It is indirectly leads to poverty eradication by providing a better working, better living, stander environment create, physical healthily and human capital formation for the poor. Infrastructure development is to make the people self-reliant and capable of meeting their basic needs out of their own resources. It is extension market; the transport and communication has profound effect in establishing links between cores to periphery. It has been found that in spite of the existence of physical and social infrastructure in certain disadvantages groups like poor children and woman.

Government body and local people are discussing the gap between roadway development and utilization the local level resources for infrastructure development. It is encourage and facilitate financial intermediaries and provide security for investment the finance to infrastructure projects. It is address the need to special skills manpower for infrastructure development accepts.

1.2 Statement of the Problem

Infrastructure development can be achieved by mobilizing the pace of natural, social and human resources management. Transportation, drinking water and communication are the most important factors for development. Development always starts from the center (core) and diffuse or extend slowly extend towards rural area, (periphery). So core always attractive periphery, because periphery areas are always supply raw materials for core areas development.

Nepal is a hill country with very weak land structure, active and young mountain and fragile geology, steep slope and rugged topography. The physiographic condition of Nepal is well knowingly considered as difficult territory for any types of infrastructure development. Many of the infrastructures if not handed carefully result different types of negative consequences in the society by disturbing road structure, destroying agricultural land, water sources, communication, power and natural resources.

Land structure in Nepal is unique and greater with its altitude variation in a short distance. Infrastructure development activities in Nepal has been rise to natural hazards likes, landslides, soil erosion, sedimentation, drought and deteriorating water resource, decrease the food production, increase the social abuse, exploitation the resources and destruction of the social structure etc. Communication is friend for people. Without communication man are paralyzed. Modern tools of the communication have made people dependent so that there is no possibility of development without communication facilities. Similarly, electrification plays a greater role in economic and social development of a region.

The urban area of Nepal have been ahead than rural area in infrastructural development. However, infrastructure does not always leave positive impact on society in straightforward and in expected rate. They bring some of the negative consequences for the societal development of a region. The socio-economic status and the ability of people of that region to accept, adopt and use for their overall development is the most. In this regards, the study has tried to find out the role of infrastructural development in one of the urban area of Nepal. More specifically this study was concentrated to search answers of the following research questions.

a) What are conditions of infrastructure development activities in the study area?
b) What is the socio-economic condition of the people in the study areas?
c) What are effect on the society and life style of the people from implementation of infrastructure development program in the study areas?
d) What negative consequences have been emerged by infrastructure development?
e) What are the problems and prospects of infrastructure development in the study area?

1.3 Objectives of the Study

The general objective of the study is to analyze impact of infrastructure development on society. The specific objectives of the study are as follows:

a) To analyze the socio-economic impact of infrastructure development on the society.

b) To examine the problem and prospect of infrastructure development.

1.4 Significance of the Study

Infrastructure development has both positive and negative impact on the society. However, while establishing or locating infrastructure the government or any other stakeholders have to focus on the positive impact. For this purpose they have to know about the positive and negative consequences an infrastructure development activity has raised. Hence, this study will explore the impact of infrastructure development on Narayan municipality wards no 1, Dailekh District and their effect on the social development activities. The study was considered as useful for the following:

a) It is helpful to other researchers, who are interested in similar research field in future.
b) It is helps to show impact of infrastructure development activities on society, environment and resources management.
c) This study provides facilities of the policy-maker and planner to design formulate relative policies of impact of infrastructure development on society.
d) It's providing substantial knowledge about the concept of infrastructure development, which is a tangible input to the people for participation in the development programs.

1.5 Limitation of the Study

The study has following limitations:

a) This study is based largely on primary data collected from the field survey with the support of secondary information.

b) Due to the time and budget only 43 respondents were taken from the sample household
c) Interview has been conducted with directly involve the infrastructure development activities and directly feel about the impact of development in study areas.
d) It is concentrated on ward of a municipality, which may or may not represent to other similar urban area in Nepal

1.6 Operational Definitions

Impact: - the terms 'Impact' means something or somebody's impact related with the changes in the society where, improve the structure, improve the access, facility, services changes.

Infrastructure: - The basic systems and service that are necessary for a country or an organization to run smoothly, for example building, transport and water and power supplies. Basic structural foundations of a society or enterprise, road, bridges, sewers etc. regarded as a country's economic foundation and permanent installations as a basis for military etc operations. It means bases or structure before activities to start the development.

Development: - It means bring the changes in a structure. It achievement of all basic necessities as well as over all improve the people life style, social structure, natural structure and changes human status.

1.7 Organization of the Study

This study is organized into seven chapters. The first chapters present the introduction on the subject matter. The second chapters include literature review of containing matters from various thesis/ dissertation, book, documents, journals and public and unpublished book. Third chapters deal with research methodology. Likewise, fourth chapter presents a brief description of the study areas, and the fifth chapter analysis and interpretation of the data, the sixth chapters includes problem and prospect in the study area and at last chapter includes the summary and major finding, conclusion and recommendation.

Chapter –Two

REVIEW OF LITERATURE

2.1 Introduction

A researcher must have the knowledge of previous studies, which are closely related to the topic. The previous study provides the foundation to the present study for the continuity in the research. This continuity in research is ensured by linking the present study with past research studies and to get way forward.

This chapter presents and discussion about the historical development of infrastructure condition in Nepal, concept of infrastructure development, empirical studies related to the infrastructure development. There are very scanty numbers of empirical studies directly related to impact of infrastructure development in Nepal as well as in the study area. However, available studies, concepts were reviewed which helped enhancing the knowledge about the impact of infrastructure development in the society, in general. Several publications related to impact of infrastructure are published in the form of books, booklets, journals, documents and many useful articles were reviewed. Likely there are several book, booklet, journals and articles written by Nepalese writer as well as foreign writers in the context of infrastructure development in Nepal were also reviewed. Likewise the researcher gone through published and unpublished document, related thesis and related polices are guidelines.

Infrastructure development perspectives is a new genuine and on appropriate approach to analyze the socio-economic status, geographical structure, people living standard and environmental condition of countryside, area and country. It focuses about the condition of infrastructure and their impact in the society, socio-economic structure and development activities. Infrastructure developments are at the very heart of the economic and social development. They provide the foundations for economic activities virtually in every aspects of modern day.

Infrastructure development is mainly related of road, bridge, building, hydroelectric power generation, telecommunication network, transportation facilities and safe drinking water facilities etc. Similarly, building facilities such as public house, school, universities, hospitals and industry or shopping complex, communication facilities

such as mobiles, phone, Radio, News papers, Televisions and computers facilities etc are also included in the infrastructure.

2.2. **Concept of Infrastructure**

Infrastructure is basic physical and organizational structures needed for the operation of a society or enterprise, or the services and facilities necessary for an economy to function. It can be generally defined as the set of interconnected structural elements that provide framework supporting an entire structure of development. It is an important term for judging a country or region's development. The term typically refers to the technical structures that support a society, such as roads, water supply, sewers, electrical grids, telecommunications, and so forth, and can be defined as "the physical components of interrelated systems providing commodities and services essential to enable, sustain, or enhance societal living conditions (Wikipedia, 2011).

Infrastructure is main subject matter for movement taken the change in the society. It is progress the social structure, economic conditions, living standard and geographical structure in world. Infrastructure facilitates the production of goods and services, and also the distribution of finished products to markets, as well as basic social services such as schools and hospitals; for example, roads enable the transport of raw materials to a factory. In military parlance, the term refers to the buildings and permanent installations necessary for the support, redeployment, and operation of military forces.

Rao (1978) in his books “urban planning and Development Authorities” Rao is a famous developer and economist , his speech can’t be taken up his isolation but it is put of large basket of urban reforms and strategies at state and national level once center and state/ urban strategies /resources commitment are worked out, then only detailed exercises could be mounted to identify strategy cities as per their institutional meads, wherever development agency are to be set up adequate resources commitment and policies aimed at requisite resource mobilization are to be made at local and state level.

Srein (1988) in his books “infrastructure planning and management” he was define mainly the three important way.

1. It affects the intensity at which facilities deteriorate and mad to be replaced.

2. It alters the mix of required capital investment. As the economy restructures and new production technology develop, demand pattern change and evolve.
3. Economic growth is distributed unevenly, same area of the country require additional infrastructure to serve growing population. In this speech say that about the "infrastructure planning and management".

Global Economic Prospects Report the World Bank (2009) had forecast the global economy would expand a mere 0.9 per cent in 2009 and world trade volume would fall for the first time in 26 years by 2.1 per cent. Overall, the outlook for economic activity weakened through 2008 and became evident through declines in GDP for many advanced economies and official recession announcements. As consumer confidence dwindled, the purchasing of goods and services declined with households cutting spending in further deteriorating conditions. Business investment and industrial production also worsened as revenues fell and credit markets seized. Inter-bank lending continued to be stalled and whilst some national interest rates have declined to near record lows, these lower rates have not been transmitted to producers and consumers who found it difficult to spend as they feared further job reductions. To compound the situation, banks have been hesitant to offer loans to consumers, seeing an additional risk with unemployment on the rise.

Gangol,(2012) the Executive Manager of the Independent Power Producers' Association (IPPAN) reasons, "The private investment is all the more important in poor countries like Nepal, which have limited resources to invest in infrastructural sectors like power, telecommunication, and transportation. If the private sector invests in hydropower, the government can allocate more funds for sensitive sectors like health and education".

Above speech show the economic status and infrastructure combination. Economic can be important indicator of development and living status increase the population. Economic and infrastructure increase with the people living stander, social status and quality of community.

2.3. Review of Empirical Studies

OECD (2006), Report that statement of Infrastructures is at the very heart of economic and social development. They provide the foundations for virtually all modern-day economic activity, constitute a major economic sector in their own right, and contribute importantly to raising living standards and the quality of life. However,

infrastructures also have less desirable consequences. To name but a few – more roads may mean more traffic and more noise, power plants may add considerably to greenhouse gas emissions, and dams may entail the destruction of large areas of countryside and the displacement of population. The next decades are likely to see an accentuation of two facets of infrastructures. On the one hand, they will prove a vital tool in resolving some of the major challenges faced by societies – supporting economic growth, meeting basic needs, lifting millions of people out of poverty, facilitating mobility and social interaction. On the other, environmental pressures in the form of changing climatic conditions, congestion and so on are likely to increase, turning the spotlight firmly on the inherent tensions between the imperative for further infrastructure development and the quest for sustainability.

This is just one good reason for taking a long-term perspective on infrastructures there are others? Infrastructures usually last a very long time, often generations, and also take a long time to build, so that bringing about change in their systems requires long-range thinking and vision. Moreover, globalization is intensifying economic and other interlink ages among countries, making it increasingly necessary to plan, develop and finance infrastructures across national borders. The key players too change over time, as the roles and responsibilities of the public and private sectors shift and evolve. Such changes underscore the importance of taking a longer-term view of both the objectives of public policy – economic, social and environmental – and the regulatory and institutional framework within which they are pursued.

Hence, the next 25 years offer a useful time frame for exploring many of the issues that will need to be tackled if these various challenges are to be addressed successfully. How much investment in infrastructures is likely to be required and what are the forces – economic, demographic, technological and environmental – shaping those requirements? How will they be financed? What difficulties is the management of infrastructure likely to confront? These are some of the key questions this publication sets out to explore. In doing so, it will highlight the importance of considering infrastructure not just as distinct sectors but also as a series of interdependent systems.

Water infrastructure technology in developed countries exists in its present form in large measure due to strategic decisions made in the past. Hence these systems are "path dependent". Fundamental strategic choices have been made in the past without proper critical evaluation, but dictate paradigms of delivery for long periods (Juuti and

Katko, 2005). Current approaches to water supply and sanitation, developed over the past 150 years, are time-consuming to install and expensive, and generate environmental problems such as traffic congestion, dirt and noise. But there is actually no Need to rely entirely on these traditional solutions, due to the fact that scientific developments have paved the way for alternatives as effective, reliable and robust as the traditional solutions, but less costly and less time-consuming to install and operate (WSSTP, 2005).

Technological change presents the opportunity to challenge some but not all of the ways in which water services are provided. The key question is the extent to which technology can bring about the closing of the water cycle such that the requirement for the input of new resources is minimized. It must so in a way that is cost-effective, appropriate for those who must use it, and capable of widespread adoption. There was technological requirements to enable localized cycles to be closed, and at the same time technological needs to manage the wider systems within which the localized systems are embedded. This may be supported by enhanced techniques for desalination in the near future, benefiting arid countries in particular. There was increasing requirements for real-time monitoring.

Sitaula (2007) has studied infrastructure development in the last two decades. He has mentioned that there is possibility that all the district headquarters would be road linked within next two years. Infrastructure including road transport is seen as a vital tool towards poverty reduction. People have shown their keen interest towards infrastructure development in their areas. The donor support towards infrastructure development is increasing over the last few decades which have been instrumental to shape the road network of Nepal to present status. Legal provisions such as Acts, Regulations, plans and policies are in place to create enabling environment. The private sectors are willing to put their investment to infrastructure sector once the political stability is restored. Rapid progress of China and India, the two big neighbors could benefit Nepal from their development. The opportunity for infrastructure development is therefore, quite high in Nepal. Capacity building of both the consulting and construction industry is required in order to shoulder this responsibility mostly from within the nation.

Sijapati (2007), on his study puts a primary concern the adequate infrastructure for the development of an economy. He states “The basic infrastructures required for facilitating the agricultural development is the facilities such as transport, marketing,

irrigation, banking, storing and power etc. These facilities are not developed adequately in Nepal though the HMG has adopted institutional approach to build it rapidly. The book states that these roads are not sufficient to fulfill the requirement of the country. The marketing of agricultural product have not been developed due to inadequate facilities of transport and communication, absence of warehousing facilities, lack of information about market conditions and lack financial facilities to producers etc.

ADB (2006) has anticipated at project appraisal that about 250 km of earth roads passable by motor vehicles would be built along six road alignments. However, changes were made following detailed road alignments surveys for all six road alignments and about 267 km of roads were constructed. At the time of the project completion review, about 200 km of the constructed roads were fully passable by motor vehicles, 29 km required minor finishing and boulder clearing, and 38 km is incomplete. Implementation difficulties in most of the incomplete sections were related to difficult terrain (in the form of vertical cliffs, unexcavated portions and streams) and security issues.

The project roads and structures were to be constructed following a labor-based environment-friendly and participatory (LEP) approach and standards. At the beginning of project implementation, road construction was rushed because of pressure from communities for physical outputs and connectivity. The quality of road construction and structures was compromised: mass-balancing was not always achieved, and cut-and-through (instead of cut and- fill) and box-cutting were practiced in a few cases. This created difficulties in managing the surplus soil, some of which was disposed of inappropriately.

Local laborers were unskilled and generally lacked previous experience of road-building. The LEP approach to constructing roads requires labor to receive training on essential skills before construction starts. Technical supervisors need to be continuously present on-site to support and supervise the work. However, not enough field visits were made by the senior supervision consultant (engineer) and the monitoring by DIU engineer was inadequate, particularly during major work periods. This affects both work progress and quality.

Jain (2006) Infrastructure problems in India range from the poor condition of the roads to shortage of electricity. The shipping ports of India need to be upgraded to meet

international standards. As India's population grows and moves to the urban cities, there is a greater demand for electricity. Over the past decade, electricity generation has grown at a compound annual rate of 5.5%, but the demand has grown even faster. Peak demand exceeded supply by 12.1% in 2005. The condition of the roads is poor; the speed limit on most of the highways is a mere 40 mph as compared to 65 mph in the United States.

Low speed limits and traffic congestion on these highways are a major cause for the delays on the roads of India. "If a consignment has to take 7 days to cross 1,400 kilometers, it is a misuse of resources," said the India Head of Chinese appliance maker, Haier Electronics Group Ltd., T.K. Bannered. These poor conditions of the roads drastically affect the business transactions across the country and need an overall repair. The international trade in India is adversely affected by inefficient ports which are congested and expensive. According to Morgan Stanley, freight as a percentage of total import value is about 11 percent in India.

2.3. History of the Infrastructure Development

The history of infrastructure development is related with the origin of human civilization. Due to the population increase, people started to use resource intensively. Scarcity of resources lead to the utilization related resource conflict, which eventually lead to the need of infrastructural development to utilize those resources optimally to satisfy human environment as well as environmental protection. Similarly, the human welfare and well being concept is also emerged. Then after many scholar, researcher, NGO, INGO and government authorities have focused their attention in infrastructural development.

According to the *Online Etymology Dictionary*, the word infrastructure has been used in English since at least 1927, originally meaning "The installations that form the basis for any operation or system".

Other sources, such as the *Oxford English Dictionary*, trace the word's origins to earlier usage, originally applied in a military sense. The word was imported from French, where it means *subgrade*, the native material underneath a constructed pavement or railway. The word is a combination of the Latin prefix "infra", meaning "below", and "structure". The military use of the term achieved currency in the United States after the

formation of NATO in the 1940s, and was then adopted by urban planners in its modern civilian sense by 1970.

The term came to prominence in the United States in the 1980s following the publication of *America in Ruins*, which initiated a public-policy discussion of the nation's "infrastructure crisis", purported to be caused by decades of inadequate investment and poor maintenance of public works. This crisis discussion as contributed to the increase in infrastructure asset management and maintenance planning in the US.

That public-policy discussion was hampered by lack of a precise definition for infrastructure. A US National Research Council panel sought to clarify the situation by adopting the term "public works infrastructure", referring to:" both specific functional modes – highways, streets, roads, and bridges; mass transit; airports and airways; water supply and water resources; wastewater management; solid-waste treatment and disposal; electric power generation and transmission; telecommunications; and hazardous waste management – and the combined system these modal elements comprise. A comprehension of infrastructure spans not only these public works facilities, but also the operating procedures, management practices, and development policies that interact together with societal demand and the physical world to facilitate the transport of people and goods, provision of water for drinking and a variety of other uses, safe disposal of society's waste products, provision of energy where it is needed, and transmission of information within and between communities."

In Keynesian economics, the word *infrastructure* was exclusively used to describe public assets that facilitate production, but not private assets of the same purpose. In post-Keynesian times, however, the word has grown in popularity. It has been applied with increasing generality to suggest the internal framework discernible in any technology system or business organization. The history of infrastructural development can be categorized into different stages.

2.3.1 Infrastructural Development Before 1700

Infrastructure before 1700 consisted mainly of roads and canals. Canals were used for transportation or for irrigation. Sea navigation was aided by ports and lighthouses. A few advanced cities had aqueducts that serviced public fountains and baths, while fewer had sewers.

The first roads were tracks that often followed game trails, such as the Natchez Trace. The first paved streets appear to have been built in Ur in 4000 BCE. Corduroy roads were built in Glastonbury, England in 3300 BC and brick-paved roads were built in the Indus Valley Civilization on the Indian subcontinent from around the same time. In 500 BCE, Darius I the Great started an extensive road system in Persia (Iran), including the Royal Road.

With the rise of the Roman Empire, the Romans built roads using deep roadbeds of crushed stone as an underlying layer to ensure that they kept dry. On the more heavily travelled routes, there were additional layers that included six sided capstones, or pavers, that reduced the dust and reduced the drag from wheels. In the medieval Islamic world, many roads were built throughout the Arab Empire. The most sophisticated roads were those of the Baghdad, Iraq, which were paved with tar in the 8th century.

The oldest known canals were built in Mesopotamia c. 4000 BCE, in what is now modern day Iraq and Syria. The Indus Valley Civilization in India and Pakistan from c3300 BCE had a sophisticated canal irrigation system. In Egypt, canals date back to at least 2300 BCE, when a canal was built to bypass the cataract on the Nile near Aswan. In ancient China, large canals for river transport were established as far back as the Warring States (481-221 BCE). By far the longest canal was the Grand Canal of China completed in 609 CE, still the longest canal in the world today at 1,794 kilometres (1,115 mi).

In Europe, canal building began in the middle Ages because of commercial expansion from the 12th century. Notable canals were the Stecknitz Canal in Germany in 1398, the Briare Canal connecting the Loire and Seine in Francein 1642, followed by the Canal du Midi in 1683 connecting the Atlantic to the Mediterranean. Canal building progressed steadily in Germany in the 17th and 18th centuries with three great rivers, the Elbe, Oder, and Weser being linked by canals.

2.3.2 Infrastructural Development from 1700 to 1870

Road: As traffic levels increased in England and roads deteriorated, toll roads were built by *Turnpike Trusts*, especially between 1730–1770. Turnpikes were also later built in the United States. They were usually built by private companies under a government franchise. Water transport on rivers and canals carried many farm goods from the US frontier between the Appalachian Mountains and Mississippi River in the early 19th century, but the shorter road route over the mountains had advantages.

In France, Pierre-Marie-Jérôme Trésaguet is widely credited with establishing the first scientific approach to road building about the year 1764. It involved a layer of large rocks, covered by a layer of smaller gravel. John Loudon McAdam (1756–1836) designed the first modern highways, and developed an inexpensive paving material of soil and stone aggregate known as macadam.

Canals: In Europe, particularly Britain and Ireland, and then in the early US and the Canadian colonies, inland canals preceded the development of railroads during the earliest phase of the Industrial Revolution. In Britain between 1760 and 1820 over one hundred canals were built.

In the United States, navigable canals reached into isolated areas and brought them in touch with the world beyond. By 1825 the Erie Canal, 363 miles (584 km) long with 82 locks, opened up a connection from the populated northeast to the fertile Great Plains. During the 19th century, the length of canals grew from 100 miles (160 km) to over 4,000 miles (6,400 km), with a complex network in conjunction with Canada making the Great Lakes navigable, although some canals were later drained and used as railroad rights-of-way.

Railways: The earliest railways were used in mines or to bypass waterfalls, and were pulled by horses or by people. In 1811 John Blenkinsop designed the first successful and practical railway locomotive, and a line was built connecting the Middleton Colliery to Leeds. The Liverpool and Manchester Railway, considered to be the world's first intercity line, opened in 1826. In the following years, railways spread throughout the United Kingdom and the world, and became the dominant means of land transport for nearly a century.

In the US, the 1826 Granite Railway in Massachusetts was the first commercial railroad to evolve through continuous operations into a common carrier. The Baltimore and Ohio, opened in 1830, was the first to evolve into a major system. In 1869, the symbolically important transcontinental railroad was completed in the US with the driving of a golden spike at Promontory, Utah.

Telegraph Service: The electrical telegraph was first successfully demonstrated on 25 July 1837 between Euston and Camden Town in London. It entered commercial use on the Great Western Railway over the 13 miles (21 km) from Paddington station to West Drayton on 9 April 1839. In the United States, the telegraph was developed by

Samuel Morse and Alfred Vail. On 24 May 1844, Morse made the first public demonstration of his telegraph by sending a message from the Supreme Court Chamber in the US Capitol in Washington, DC to the B&O Railroad outer depot (now the B&O Railroad Museum) in Baltimore. The Morse/Vail telegraph was quickly deployed in the following two decades. On 24 October 1861, the first transcontinental telegraph system was established.

The first successful transatlantic telegraph cable was completed on 27 July 1866, allowing transatlantic telegraph communications for the first time. Within 29 years of its first installation at Euston Station, the telegraph network crossed the oceans to every continent but Antarctica, making instant global communication possible for the first time.

2.3.3 Infrastructural Development from 1870 to 1920

Roads: Tar-bound macadam, or tarmac, was applied to macadam roads towards the end of the 19th century in cities such as Paris. In the early 20th century tarmac and concrete paving were extended into the countryside.

Canals: Many notable sea canals were completed in this period, such as the Suez Canal in 1869, the Kiel Canal in 1897, and the Panama Canal in 1914.

Telephone service: In 1876, Alexander Graham Bell achieved the first successful telephone transmission of clear speech. The first telephones had no network, but were in private use, wired together in pairs. Users who wanted to talk to different people had as many telephones as necessary for the purpose. A user, who wished to speak, whistled into the transmitter until the other party heard. Soon, however, a bell was added for signalling, and then a switch-hook and telephones took advantage of the exchange principle already employed in telegraph networks. Each telephone was wired to a local telephone exchange, and the exchanges were wired together with trunks. Networks were connected together in a hierarchical manner until they spanned cities, countries, continents, and oceans.

Electricity: At the Paris Exposition of 1878, electric are lighting had been installed along the Avenue de l'Opera and the Place de l'Opera, using electric Yablochkov arc lamps, powered by Zénobe Gramme alternating current dynamos. Yablochkov candles required high voltages, and it was not long before experimenters reported that the

arc lights could be powered on a seven mile (11 km) circuit. Within a decade scores of cities would have lighting systems using a central power plant that provided electricity to multiple customers via electrical transmission lines. These systems were in direct competition with the dominant gaslight utilities of the period.

The first electricity system supplying incandescent lights was built by the Edison Illuminating Company in lower Manhattan, eventually serving one square mile with six "jumbo dynamos" housed at Pearl Street Station. The first transmission of three-phase alternating current using high voltage took place in 1891 during the International Electro-Technical Exhibition in Frankfurt. A 25 kilovolt transmission line, approximately 175 km (109 mi) long, connected Lauffen on the Neckar with Frankfurt. Voltages used for electric power transmission increased throughout the 20th century. By 1914 fifty-five transmission systems operating at more than 70,000 V were in service, the highest voltage then being used was 150,000 V.

Water Distribution and Sewers: In the 19th century major treatment works were built in London in response to cholera threats. The *Metropolis Water Act (1852)* was enacted. "Under the Act, it became unlawful for any water company to extract water for domestic use from the tidal reaches of the Thames after 31 August 1855, and from 31 December 1855 all such water was required to be effectively filtered. The *Metropolitan Commission of Sewers* was formed, water filtration was made compulsory, and new water intakes on the Thames were established above Teddington Lock.

The technique of purification of drinking water by use of compressed liquefied chlorine gas was developed in 1910 by US Army Major Carl Rogers Darnall, Professor of Chemistry at the Army Medical School. Darnall's work became the basis for present day systems of municipal water purification.

Subways: In 1863 the London Underground was created. In 1890, it first started using electric traction and deep-level tunnels. Soon afterwards, Budapest and many other cities started using subway systems. By 1940, nineteen subway systems were in use.

2.3.4 Infrastructural Development 1920 Onward

Roads: In 1925, Italy was the first country to build a freeway-like road, which linked Milan to Como, known as the Autostrada dei Laghi. In Germany, the autobahns formed the first limited-access, high-speed road network in the world, with the first section from Frankfurt am Main to Darmstadt opening in 1935. The first long-distance rural freeway in the United States is generally considered to be the Pennsylvania Turnpike, which opened on October 1, 1940. In the United States, the Interstate Highway System was authorized by the Federal-Aid Highway Act of 1956. Most of the system was completed between 1960 and 1990.

2.4 History of Infrastructure Development in Nepal

Infrastructure development in Nepal started during 1950. Until then Nepal had no infrastructure linkages to the rest of the world. Since then, the government has been making efforts to provide increased access to education, transportation, communication, health services, electricity and other infrastructure services. Despite these efforts Nepal remains one of the poorest countries with poverty reduction as the major challenge.

One of the most dominant challenges of Nepal is to develop the basic infrastructures to accelerate its pace of development. For this, transportation plays a vital role in the overall development and socio-economic transformation of a country. In Nepal, road transport has predominant role because it is the only means for public transportation except the limited air service to some part of the country which is not affordable to common people. Therefore, Road infrastructure serves as a backbone for an overall socio-economic development of Nepal. Negligible length of Railways available in Nepal has diminished surprisingly in the last 4 decades. Janakpur Jainagar Railway which is a narrow gauge in poor condition is the only railway facility in Nepal. Since the overall development of Nepal is pivoted around Infrastructure development focused at road transport and aimed at poverty reduction, hence, the Government of Nepal has its priority in this sub-sector.

2.5 Status of Road Development in Nepal

Road development in Nepal started only after the advent of democracy in 1950. The first motorable road was constructed in the Kathmandu Valley by the then Rana

rulers in 1924. The 42 km all weather gravel road between Amlekhganj to Bhimphedi was the first road of its kind constructed in 1929 outside the Kathmandu valley. The first long distance road to link Kathmandu with the Terai was taken up in 1953 with Indian assistance. This 115 km long road between Thankot (Kathmandu) and Bhainse(Makawanpur) was opened to traffic in 1956. The National Road Network comprises of National Highways, Feeder roads, urban roads, District roads and Village roads. The National Highways together with the Feeder roads constitute the Strategic Road Network (SRN) of the country. The Strategic Road Network is the backbone of the National Road Network. The construction and maintenance of the strategic roads fall on the responsibility of the Department of Roads.

Thee district roads together with village roads constitutes the District Road Network. At present the National Road Network has altogether 24000 km (30% blacktop, 27% gravel and 43% earthen roads) in 2008. The strategic, urban and local roads share 32.5%, 13% and 54.5% respectively in the National Road Network. The Strategic Road Network serves as the backbone of the National Road Network. The strategic roads have high traffic volume in comparison to district roads. There are 15 National Highways and 51 Feeder roads totaling 8000 km in the Strategic Road Network. The government plans to increase the length of SRN to 12000 km by the year 2017.

Local Road Network (LRN), comprises of District Roads, those urban roads not included in SRN, village roads, agriculture roads, mule trails and tracks, Trail Bridges, Ropeway etc. With the advent of multiparty democracy in 1989, there has been a tremendous demand of constructing roads in rural areas. Though there are District Transport Master Plans prepared by the districts the growth of LRN is quite haphazard. Road development status of Nepal is not satisfactory compared to the south Asian countries. Nepal has a very low road density of 6.39 km per 100 sq km thus indicating poor accessibility to various parts of the country. At the end of first year of eleventh plan 6 districts head quarters namely Bajura, Dolpa, Mugu, Humla, Manang, Solukhumbu are still lacking road connection. The Eleventh plan aims to road link the 3 district headquarters namely Bajura, Manang and Solukhumbu this year and the remaining three headquarters by the end of the eleventh plan that is 2010 (Sitaula 2007).

2.6 Impact of the Infrastructure Development on the Society

GDP rised of Nepal, 4.6% in 2010 and 4.5% in 2011, with to contributed by agricultural sector, out Of 3.5%, industrial contribution national growth of 3.1% and growth rate in services sectore of 6.9%. The government has set a target of achieving annual economic growth rate of 8.3% by 2016-17, of which 5% growth is projected in the agriculture sector and 9.7% in non-agriculture sector. The relatively high growth in agriculture in 2007-08 was due to a favorable monsoon that year. In order to maintain this growth in a sustainable manner, it would be crucial to improve irrigation which is currently extended to around two thirds of the land, of which less than half has year-round irrigation. GoN has embarked upon a plan to increase the total year-round irrigated area to 67% by 2027, at an estimated cost of USD 3.6 billion (at 2003-04 prices).

Within industry, manufacturing declined by 0.9% whereas electricity, gas and Water rose by 3.4%, construction by 3.1% and mining by 2.8%. Broadly the Infrastructure sector (which is dominated by hydro-power projects) has seen heightened activity. However, of the estimated exploitable hydro-power potential of 42000 MW (out of total estimated hydro-power potential of 83000 MW); installed capacity is only about 560 MW (only 40 % of the population has access to electricity). The target set by the government is to generate 4000 MW of electricity from hydropower 2027(2010/011 report) to meet the projected domestic demand. This by itself would need a fairly substantial amount of investment, estimated at about USD 6 billion.

Nepal is a natural scenic beautiful country in the world and it is play import role for developed the tourism sector. Tourism sector would have in generating employment, increasing foreign exchange earnings and maintaining external sector stability, it is crucial for Nepal to speedily develop. Tourism sector related with infrastructure because infrastructure is main baseline people to people, people to place and core to periphery relation developed. It is interconnected with infrastructure development. Tourism sector also has a strong role play in economic, given the significant positive relationship between tourism and infrastructure. If any areas were to look at the increasing levels of urbanization which puts presser in the resource with urbanization put presser way of increased demands on physical infrastructure and urban services, the need for higher levels of investment in urban infrastructure (water supply and sanitation, solid waste management, education, healthcare facilities, urban transport and other urban amenities)

is clearly evident. At present, around 50% of the urban population has access to water and sanitation services. This is targeted to increase to 100% by 2027.

According to the economic survey 2010/011 total length of road in Nepal is 12,455km. Total road out of the 6874km is blacktopped, 5036km is graveled and 9545km is earthen were constructed. There has been quantitative and qualitative increase in telecom services, daily new papers, TV transmission services, Radio broadcasting service and cable printing service in the country. The levels of investment would be further enhanced if the investment in urban areas is coupled with the need to provide similar facilities in scattered rural areas. Unlike hydro-power projects which have attracted substantial private sector interest for investment, urban infrastructure projects are almost entirely funded by Urban Local Bodies (ULBs) which are significantly cash-strapped and also unable to access finances from commercial banks and capital markets due to their poor financial condition.

Hence, financing of infrastructure projects across various sub-sectors from non-government sources would be a major challenge and would require a significant level of push and sustained support through investor-friendly

Infrastructure development mainly aim are providing basic needs for local people and investment the minimum by the local people and society. It is indirectly leads to poverty eradication by providing a better working, better living, stander environment create, physical healthily and human capital formation for the poor. Infrastructure development is to make the people self-reliant and capable of meeting their basic needs out of their own resources. It is extension market; the transport and communication has profound effect in establishing links between cores to periphery. It has been found that in spite of the existence of physical and social infrastructure in certain disadvantages groups like poor children and woman.

Government body and local people are discussing the gap between roadway development and utilization the local level resources for infrastructure development. It is encourage and facilitate financial intermediaries and provide security for investment the finance to infrastructure projects. It is address the need to special skills manpower for infrastructure development accepts. Hence, financing is main challenge for collection because investor always investment in the non production sector so, it is hard work for agree to the invest in the infrastructure projects. Infrastructure projects are across various

sub-sectors from non-government sources. It would be a major challenge and would require a significant level of push and sustained support through investor-friendly.

2.7 Infrastructure Development Situation in Study Areas

Until quite recently, municipalities has been formulated and implemented different types of infrastructure developed and services project in developing countries. With it have budget expender power, policy level power, decision making power and income generation power handed down from higher level of government to lower level. According to the municipalities survey report 2010, situation of the infrastructure development in the Narayan municipality total length of road is 117.63km, out of the 728m is blacktopped, 116km is graveled and 902m is earthen constructed. There has been increase the different types of communication facilities e.g. District post office 1, out of the total landline telephone distribution is 2048, CDMA is 700, prepaid is 19 , mobile user people are 700, cyber center 3, new paper 4 daily and 4 f.m. radio are services aviable etc.

Narayan Municipality has been distribution the total number of 1300 tap for drinking water in this study area. Out of them 814 is distribution of public tap and out of the 486 are distributions of private tap. Out of 2529 household are using the electricity facilities. Social services facilities are situated in the study area for education service institutions are 26. out of the 4 are higher secondary school, 4 are pulse two level school, 4 are lower secondary school and some other are primary school and boarding school etc. in this area health services, housing and micro- industry program are also lunching.

CHAPTER-THREE

RESEARCH METHODOLOGY

3. 1 Research Design

The research design for this study is based on both exploratory & descriptive types. Descriptive research design has been used to gather qualitative information about the research area & exploratory research design has been used to collect information about the possibilities of particular research for study of infrastructure development, their impact on society of Narayan Municipalities ward no 1 Dailekh. Both primary and secondary data were collected from the library, District office, and Municipality office, CBS and Different NGOS /INGOS. Primary data are collected in the field by using various tools such as questionnaire survey and key informant interviews .

3.2 Nature & Sources of Data

The data in this study were qualitative & quantitative in Nature. Both primary & secondary source were collected to fulfill the objectives of this study. But the study is mostly based on the primary data collected through field survey through different techniques such as interview with the respondent, some case observations, focus group discussion and other informal discussions. The secondary data were collected from necessary books, research papers & reports, informative articles, various individual information, published documents & unpublished information sources.

3.3 Rationale of the Study Area

The study area lies in the center part of the Narayan Municipality, where all modern facilities, Government offices, private service providers, micro industrial sector & other development activities are available. In this case, it is an appropriate area to examine the impact of Infrastructure development on society. Similarly, this area is well known to the researcher, which is another cause of selecting for the study.

3.4 Population and Sampling Procedure

The study was conducted in one ward of Narayan municipality Dailekh District. The priority for selection had been made on the basis if ward one those recently influences by the infrastructure activities, therefore among the nine ward of Narayan Municipality ward number 1 had been selected as sample for study. The selection of information for study was based on socio-economic consideration follow random sample system. This information were selected under different areas that are occupational activities, economics, social status, literacy standers and living standers impact by infrastructure development activities in the study area.

Out of 877 households in the study area only 43 (5% HHs) household were selected as the respondent for study. These have been sampled randomly and preference has been given to these households related with impact of infrastructure development.

Their locations were verified by using topographic maps published by government of Nepal. Study had been mainly related with impact of infrastructure development, prospect of infrastructure, problem of infrastructure in the society and utilization condition of resource etc. I was observing about the existing of infrastructure development in the filed. Stratified random sampling was done to select informants using random number. Most of the interviews were done with the family head of house as well as they were also done with the housewife and other family member who are available at that time.

3.5. Methods of Data Collection

This research has been conducted by employing various methods for data collection. Both primary as well as secondary data has been collected. The researcher himself collects the primary data from the respondents by conducting interviews and informal group discussion during the meeting carried out in the open place with the community people. Following techniques have been used to collect data for this study.

3.5.1 Household Survey

The major method to collect the data of this study was interview. The interview of the respondents was taken through structured questionnaire to the household respondent. Interview with the family head as well as other available member of the household were conducted as per the survey questionnaire. A structured scheduled was used for collecting data in the present study. The questionnaire has structured into three specific sectors. First part is structured to take detail information about respondents household. Second, part was structured for impact of the infrastructure development on the society with major problem and infrastructure development effect in area was in the last part.

3.5.2 Key Informant Interview (KII)

To gather more and qualitative information Key Informant Interview schedule was developed and used as a data collection tools for this study. Specially, this technique has been used only for informants' district level responsible authorities - CDO, LDO, district level INGOs/NGOs senior level staff member, and local political leader of this study area to collect additional information thought interview about the major intervention and socio-economic impact through infrastructure development activities in Narayan Municipality. The questions were asked in interview to collect additional qualitative information too. The interview was taken as a cross checking for data obtained from sample survey.

3.5.3 Direct Observation

Nearly three weeks time was spent in the research area as field observation and questionnaire survey. During the study period and field visit to the community, most of the households' living standards, varieties of social activities, the main people of the family, housewife were interviewed. The major intervention, positive and negatives impacts of infrastructure development activities were discussed with the family members during the visit. A special attention was paid on those families who were involved in income generating activities, and families having access on improved the status. While interviewing with the respondents, the researcher observed and recorded the activities/status of the family members, respondents and other people of the society. The way of working of respondent, livelihood status, traditional/modern occupation, farming

system, family structure, adopted improved technologies and other related evaluated and obtained through this technique. Such observations have helped to make the judgments on the information provided by the household respondents and other key informants.

3.5.4 Secondary Data Collection

Most of the secondary data relevant with this study were collected with different governmental and non-governmental organizations working in the infrastructure development program related field in Nepal. The literature review includes reports published through different organizations, books and article published in different article and daily newspaper. The major offices visited during the literature and data collection are Center library, Central Bureau of statatistics Kathmandu, National Trust for Natural Conservation (NTNC) Khumaltar Lalitpur Nepal Development and Research Institute, Dailekh, District Development Committee, Dailekh, Narayan Municipality office, Dailekh and related websites. Discussion with the key persons of the organizations was also made during the literature collection and before visiting the study area for field survey.

3.6. Data Analysis and Presentation

Data generated during fieldwork as well as the data collected from secondary sources have been scrutinized, classified and tabulated according to demand of issues discussed in different chapters. Basic statistical tool and methods have been utilized to analyze results and interpret the concepts, results and discussions. Qualitative data has been analyzed using simple statistical tools like frequencies and percentage distribution. Qualitative data has been analyzed descriptively and to extend possible with the use of table and distribution. Based on the finding of analysis, careful interpretations of the findings are made. During the analysis of the collected data from primary and secondary sources, MS-Word, MS-Excel etc software were used for statistical analysis. Various tables, charts, figures diagrams and maps were created by using computer software programs and cartographic techniques. Qualitative information provides depth and detail understanding of respondent's.

CHAPTER- FOUR

INTRODUCTION OF THE STUDY AREA

This chapter discuss briefly about the infrastructure development, climatic, population, natural resource, ethnicity composition, and occupation etc of the study area.

4.1 Introduction to Dailekh District

The term Dailekh has been derived from the Sanskrit word Dadhi lekh. It refers to the hill where the curd is available easily. And later it has been changed into Dailekh. It lies on the lap of hills, in the Bheri zone of Western Development Region. The area of Dailekh district is 1402 sq. km. It is surrounded by 4 districts named Jajarkot, Kalikot, Achham and Surkhet. The altitudinal difference between the highest place Mahabu and the lowest place is Dungesher is 4168m and 544m. Lohore and Chhanghat are the major river in this district. The average temperature of the district is 15^0c with maximum temperatures 34.9^0c and minimum temperature below 5^0c There are 55 VDCs one Municipality, 11 elaka and two electoral constituencies. According to the CBS 2011 the population of Dailekh district is 263,83. Among of them 128,281 (48.62%) are male and 135,554 (51.38%) are female. There are 51,301 households. The density of population is 176 per sq. km. The different ethic groups are living in Dailekh district.

It is less developed district from the point of view of human development index 2004. Now a day infrastructure development activities are slowly increasing and their population are getting modern scientific facilities. All the VDCs have connected with road transportation facility, 55.73 percent household of the district have got access to safe drinking water and 19.86 percent (HDI 2004) households have toilet facility. Electricity, micro-industry, micro-finance, communication are other facilities gaining by growing number of households of the district.

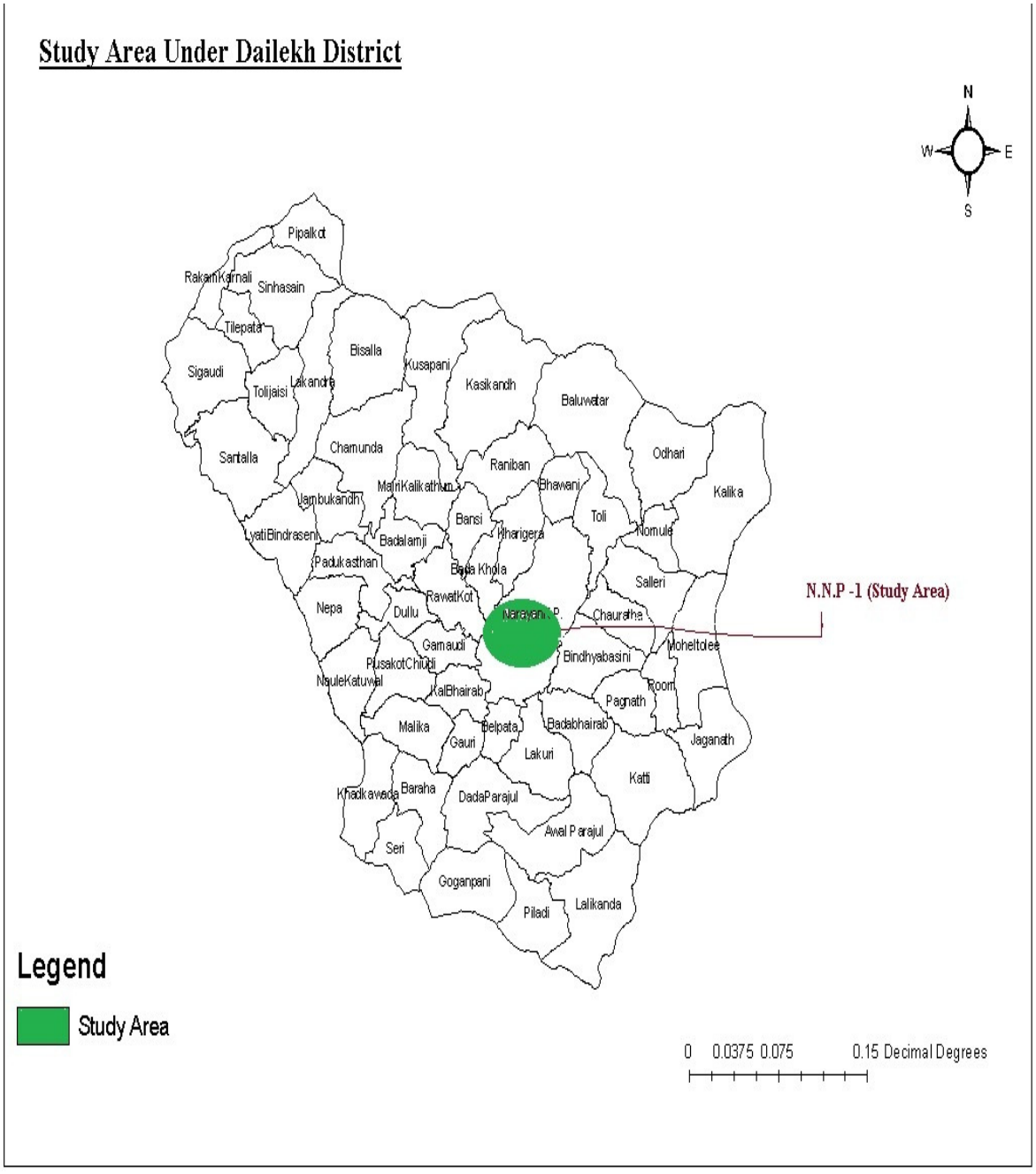
4.2 Narayan Municipality

It is the district headquarter located nearly middle of the Dailekh district with an area of 67.01 Km^2. Lohore khola is lies in the east side of the municipality. Bawani VDC

and Toli VDC of the Dailekh District lies in the north side of the municipality. TaraGhat Khola lies in the west side of the municipality. Chham Ghata Khola and Belapata VDC are lies in the south side of the municipality. The selected study area, ward no. 1 of the municipality, is located the center part of the municipality. Different types of infrastructure Development activities were constructed, there. It is the district headquarter located nearly middle of the Dailekh district with Chham Ghata is lies in the west side of the study area. Ward no 4 and 3 of the ward no 1 lies in the north side of the study area. Ward no 2 lies in the west side of the study area. Ward no 7 are lies in the east side of the study area. The selected study area, ward 1 of the municipality, is located the center part of the municipality. Different types of infrastructure Development activities were constructed, there. It is situated in the very famous and popular place known as the Kota Gadi, Panchadewol, Belaspur temple, Shreethan temple (we know it as the Juwal Debi temple, where are situated the god shiva and goddess satidebi) and Narayan temple.

Population is not equally distribution some place big and some place little. Population distribution in the ward no 1 is higher than the other ward. Infrastructure development activities and structured are not equally distribution. All type of development activities, modern facilities and impact we can find in the center side of the Municipality. Government facility and activities available in the middle part of the municipality. There are available infrastructure Transportation, Drinking water, Electricity, Communication, Micro-industry, Building Structure and other facilities.

1 **Maps of the Study Area**



4.2.1 Populations Distribution of the Narayan Municipality

The total population of the municipality is 23,486 out of the total population 11317 is male and 12467 are female. The total household in the municipality is 4655. The average population density is 350 per sq.km. The total household in the ward 1 is 877. Out of the total population of ward 1 is 3890 with 2023 is male and 1867 is female (Dailekh Municipality report 2008). The following table shows that about the total population in the Narayan municipality.

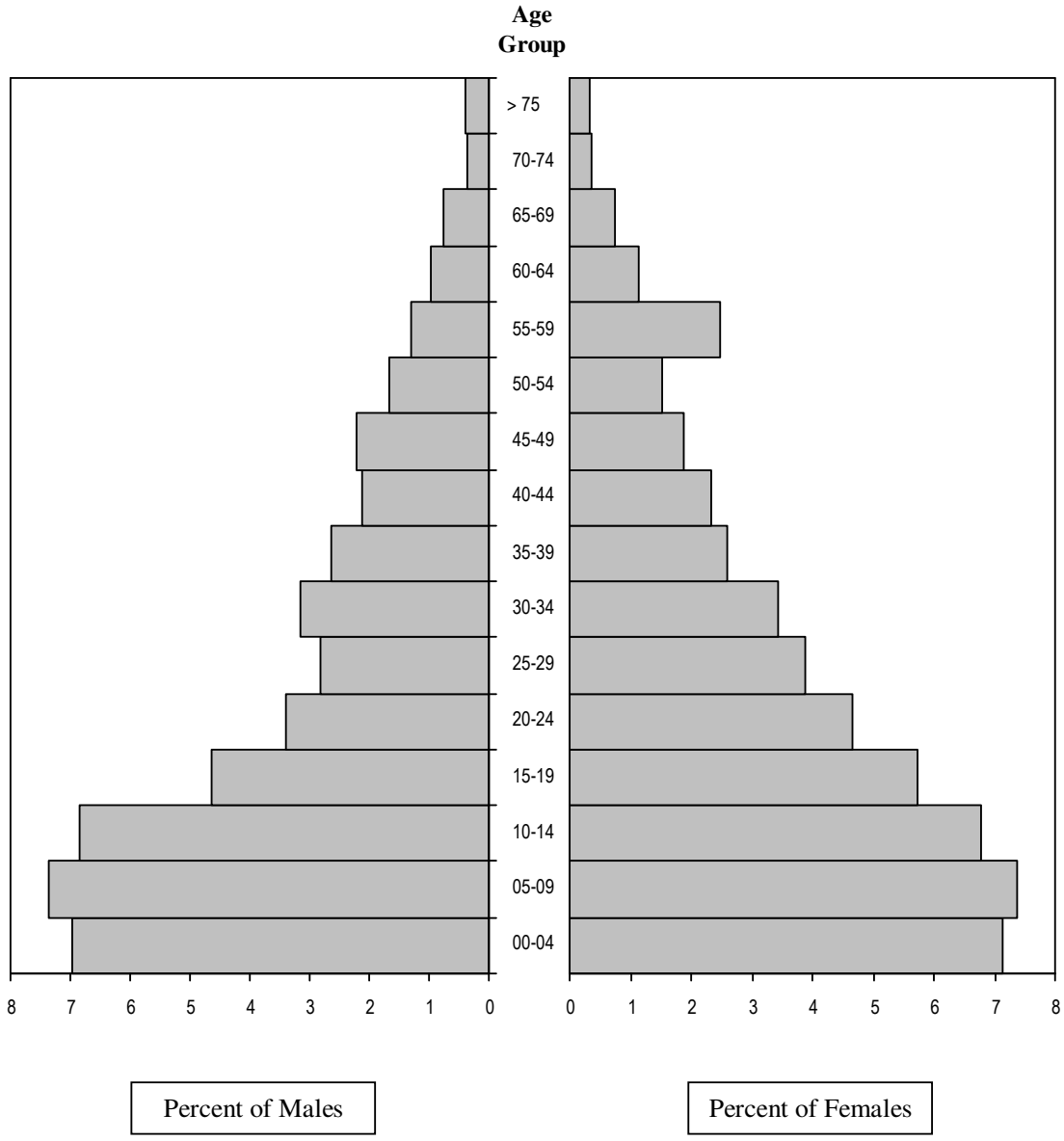
Table: 4.1 Total age of population in Narayan municipality

Age	Male	Male%	Female	Female%	Total	%
0-4	1658	6.97	1692	7.12	3350	14.09
5-9	1751	7.36	1754	7.38	3505	14.74
10-14	1627	6.84	1617	6.79	3244	13.63
15-19	1105	4.65	1366	5.74	2471	10.39
20-24	805	3.39	1105	4.65	1910	8.04
25-30	667	2.81	927	3.89	1594	6.70
31-35	749	3.15	818	3.44	1567	6.59
36-40	630	2.65	621	2.61	1251	5.26
41-45	501	2.11	556	2.34	1057	4.45
46-50	524	2.21	449	1.89	973	4.10
51-55	397	1.67	359	1.51	756	3.18
56-60	306	1.29	593	2.49	899	3.78
61-65	234	.98	268	1.13	502	2.11
66-70	179	.75	181	.76	360	1.51
71-75	89	.37	84	.35	173	0.72
75 above	95	.39	77	.32	172	0.71
Total	11317	47.59	12467	52.41	23784	100

Source: Municipality population Survey Report 2008

Table shows that female population greater than male population in the Narayan Municipality.

Figure:4.1 Age and Sex Pyramid, Narayan Municipality, Dailekh



DailekhSource: Municipality population survey Report 2008

4.2.2 Cast and Social Structure

Narayan municipality accommodates the resident of the many cast/ethnic groups. Among this groups Brahman and chhetri are occupy most of the occupation such as public services and business activities. The other cast/ ethnic groups such as magar, shreeth, dalit and some chhetri are involve with the agricultural, business, laboures work, poultry farming, carpenters and social services. Their religion, mother tongue, living

standard and social activities are more or less equal. The society of this municipality is made up of homogeneous castes groups.

Definitely population distribution is not equal in the Narayan Municipality. The population is distributed in two types: one is core area, where there different structure and infrastructure are developed and next one is periphery area, where less than establishes the infrastructure development lack of the access the modern facilities and out of the infrastructure development activities. In these areas building structure are not equal, there is a three types maximum structure of the semi pakki, kachi and pakki.

4.2.3 Climate and Infrastructure Situation

The climate of the municipality is moderate types. Sub- Tropical and warm temperature is common in Narayan Municipality. The summer season starts form March to August. It is estimated that 80 percent of the rain fall occurs in the month of the June and July. Winter season starts from December to February. From October to May remains dry in this area. The climate of this area is very nice, cool, tolerable and suitable for every season. In the sparing season temperature goes up 34^0c and other season temperature goes less than 3^0c. The people wear medium warm clothes because of the pleasant weather. There is neither very hot nor very cold. Most of the area's covered by forest so the climate of this area is suitable for all human beings, creatures and animal kingdom. Infrastructure situation of the municipality lies in center and highly centering the infrastructure distribution. Infrastructure distributions are not equal core side developed more then the periphery. Core side people involve with the modern types of occupation e.g. trade, social services, education activities, industrial activities, and involve the foreign employment with periphery areas people involve the mainly agricultural activities e.g. vegetarian production, fruit production, Raw material production for the industry and involve the labor works.

4.2.4 Occupation

Majority of the people in the study area involve in the social service and business activities. The central business area lies at the central part of the municipality. As it is the headquarter of the district also, most of the government offices are established here. It has created to the modern facilities and services in that area. So, very small person of the population has engaged in the agriculture and vegetable productions. Now day’s people

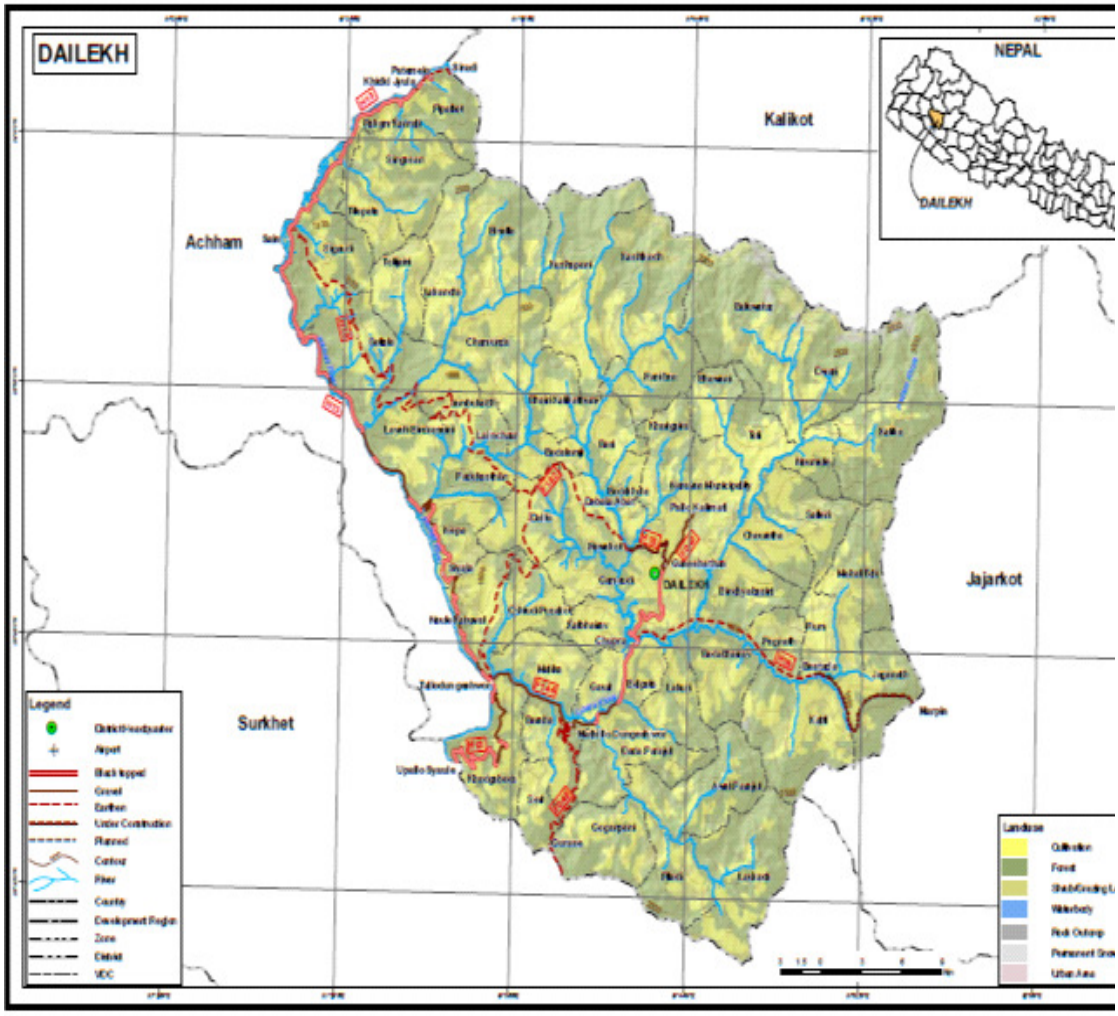
have been involving in poultry farming. Some people have engaged in wooden work, carpenter and furnisher industry in different market places.

Study area maximum population has been involved on the business activities; Public service and maximum female are engaging with the housewife and supporter for the male activities. Now days some people related with foreign employer and wage labors. Less then population are involve the agricultural production and all need agricultural production has been import another area.

2.5 Infrastructure Development

The study area has available good transportation facility, as it is located at the core of the municipality. It also has market facility, electricity, drinking water, communication, banking and financial services. It also has rich telecommunication facilities. The private television cable operators are giving such services. Electricity facility is extended in all area of municipality. Safe drinking water facility is provided by Dailekh drinking water organization and maintains core area and trying to extend it into regularly in all area. District level government offices have been situated in this ward. Small-micro-industry and poultry farm have been established this area. The municipality has been able to provide moderate modern facilities.

.2 Maps of the Infrastructure Development in Dailekh District



CHAPTER-FIVE

SOCIO-ECONOMIC STATUS OF STUDY AREA

This chapter presents the outcomes of the field research dealing about the socio-economic status of respondent. It include age, sex, occupation, educational qualification, marital Status, employment and economic status are only mentioned to specify the further analysis of the respondent which is important before analyzing the impacts of the infrastructure on society. It includes different infrastructure development and their impact on society. Developments are calculation to the impact of Infrastructure on society. The information has been analyzed in terms of positive and negative impact of the infrastructure development.

5.1 Age and Sex Composition of the Respondents

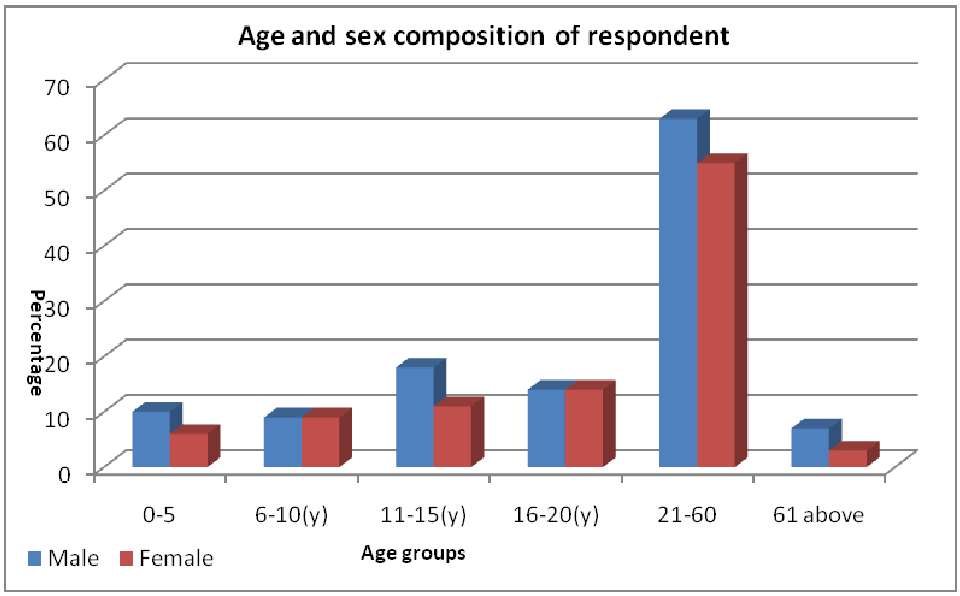
Respondent's age and sex over categorized into the 6 and two group respectively. Age groups are divided from 0-5, 6-10, 11-15, 16-20, 21-60 and 61 above. The distribution of age and sex is show in the table given below.

Table: 5.1 Age and sex composition of sample household

Age groups	Male	Male%	Female	Female%	Total	%
0-5	10	8.26	6	6.12	16	7.31
6-10	9	7.44	9	9.18	18	8.22
11-15	18	14.88	11	11.23	29	13.24
16-20	14	11.57	14	14.28	28	12.79
21-60	63	52.07	55	56.12	118	53.88
61 above	7	5.79	3	3.06	10	4.57
Total	121	100	98	100	219	100

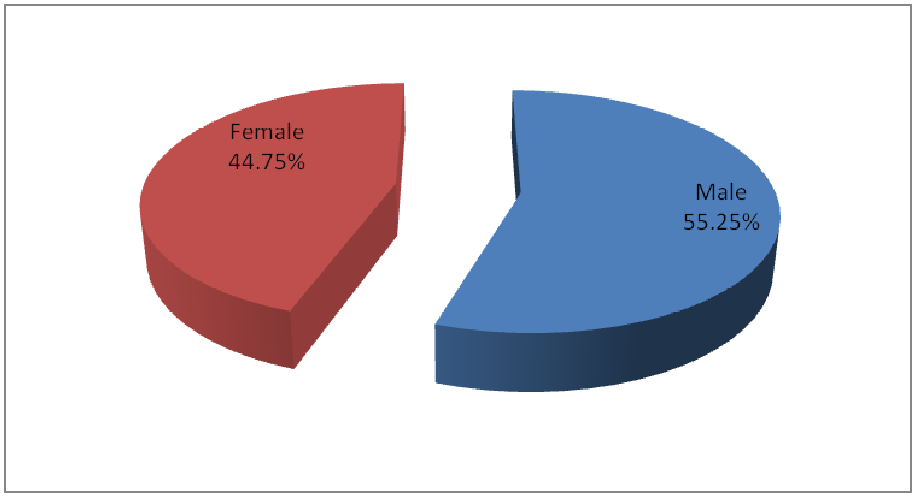
Source; Field survey report 2012

Figure No. 5.1 Age wise composition of sampled HHs



The above table and figures show that 53.88percent of the respondent fall in the age group of between the 21-60 years, which is also the age of economical active and social respondent person. Out of the total 219 respondent, 121 were male and 98 were female respondent. Age group between 0-5 is a child, 6-10 is a primary level ,11-15 is a school level student age, 16-20 is a plus two level and 61 above is considered as the matured as well as the most home security and children care taker.

Figure No. 5.2 Gender wise composition of sampled HHs population



Source: Field Survey 2012

The sex composition is another basic component of the demography. The analysis of the sex composition of the respondent is on of the essential part of the research work. The above figure 5.2 says that out of the total population female population is less than male population. Out of the total population is 55.25% male and is 44.75% female in the study area.

5.2 Cast/Ethnic Composition and Population of Study Areas

In the study area the people have diversified cast /ethnic and religions composition, as they are situated long generation and some are migration form different VDCs of the district. In this study area found that majority of the caste/ethnic groups of Thakuri and Chhetri. The major religions groups were found in the Hindu. For the consistency of the data municipality profile and the household survey report were used as a secondary resource for the study. The distribution of household composition number and percentage of cast wise and religion distribution is presented in the following table.

Table:5.2 Cast/Ethnic Composition of the Respondent

SN	Caste/Ethnic	Total No of HHs	percentage
1	Brahman	2	4.65
2	Chhetri	14	32.56
3	Thakuri	12	27.90
4	Janjati	3	6.98
5	Dailt	12	27.90
	Total	43	100.00

Source: Field Survey 2012

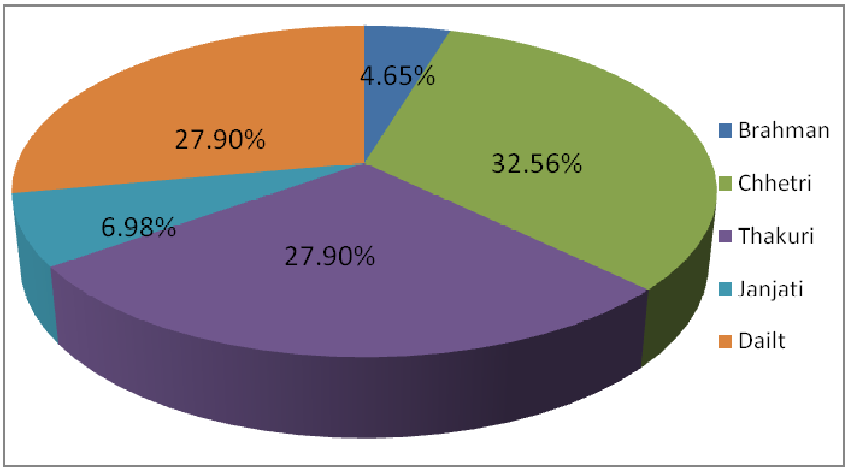


Figure no: 5.3 Cast/Ethnic wise Composition of the Respondent

Above table and figure shows that study area is made of different cast/ethnic groups of people who were living with kindly, co-operation and relatively in study areas. Among total sample Houshold majority of the chhatri 32.56% was found as well as 27.91% was thakuri, similarly followed by 27.90% was dailt Barhmin and janjati was occupy 4.65%,6.98% respectively in this study area.

5.3 Religion and Mother Tongue

The study area has caste/ ethnic diverging. However all the respondents reported that their mother tongue is Nepali with all follow Hindu religious system

5.4 Marital Status

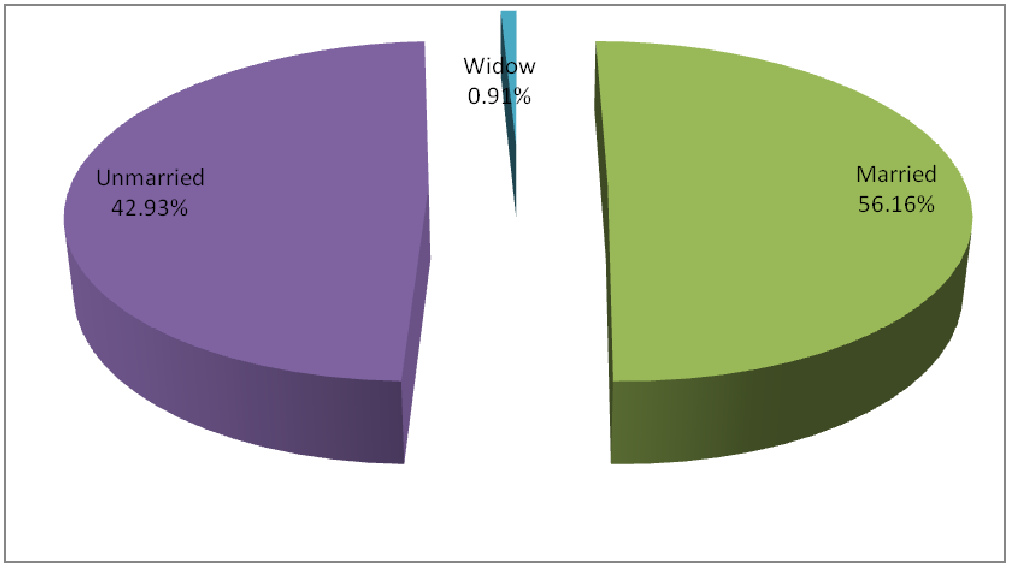
The marital status is another basic component of the demography. Analysis of the marital status of the respondent is one of the great parts of the research work. The following table shows the marital status of the respondent.

Table: 5.3 Marital Status of Respondent

Marital Status	Male	Female	Total	percentage
Married	61	62	123	56.16
Unmarried	59	35	94	42.93
Widow	1	1	2	0.91
Total	121	98	219	100

Source: field Survey 2012

Figure no: 5.4 Marital Status wise sample HHs population;



The above table and figure shows that about the martial status of the respondent. Married population is greater than unmarried population in the study area. Less than 1 percent respondents were found widow.

5.5 Level of Education

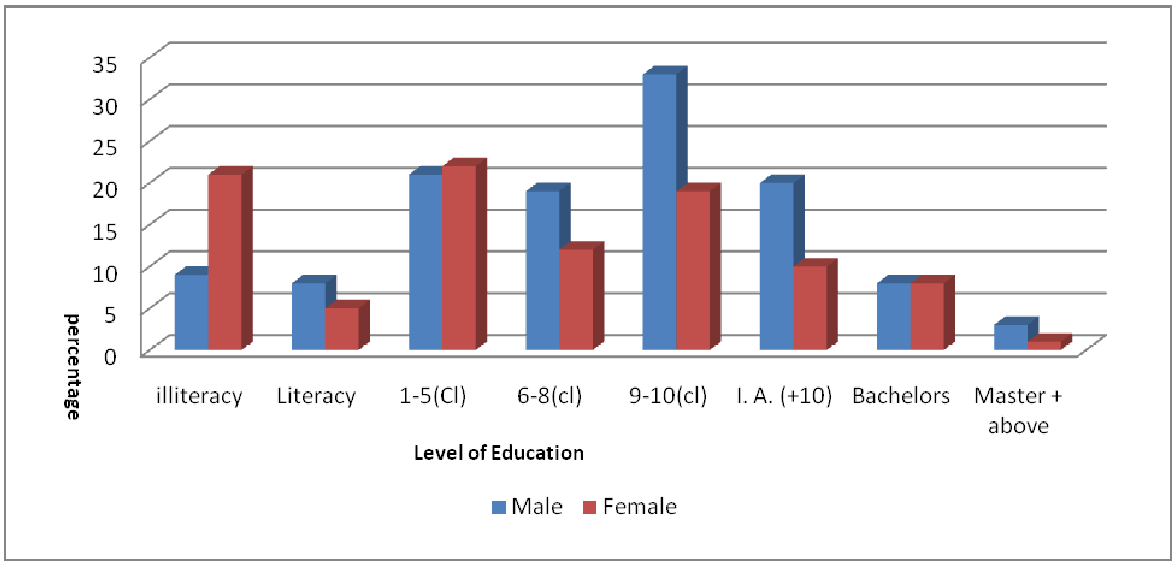
The total population of the municipality wards 1 is 3890. Out of the total population, male are 2023 and female are 1896. The Literacy rate of this ward is higher then the other ward. Literary rate differ between male and females.

Table: 5.4 Status of the literacy and Educational of Respondents

	Male		Female		Total	
Status of literacy	Number	Percent	number	Percent	Number	Percent
illiteracy	9	7.44	21	21.43	30	13.69
literacy	8	6.61	5	5.10	13	5.94
1-5	21	17.36	22	22.45	43	19.64
6-8	19	15.17	12	12.25	31	14.16
9-10	33	27.27	19	19.39	52	23.74
I. A(+10)	20	16.53	10	10.20	30	13.69
Bachelors	8	6.61	8	8.16	16	7.31
Master above	3	2.48	1	1.02	4	1.83
Total	121	100	98	100	219	100

Source: Survey Field Report: 2012

Figure: 5.5 Status of literacy and education of Respondent



Field: Survey Report 2012

The above table and figure show that educational status of sample household populations in Study area. Most of the people are found literate and only 13.69% populations are illiterate. Out of the total population only 23.74% have secured secondary education. Similarly, 19.64% have achieved the primary level education, 13.69% have succeeded plus two level educations similarly 7.31% have achieved bachelor level education whereas only 1.83% has secured master level education. From this in formation, we can say that study area has domination of literate people.

5.6 Occupational Status of Respondent

Occupation is one of the important indicators of the social status and economic status show the people. It also determined household wealth, well being and social prestige in the society and plays the vital role for infrastructure development on society. But, in the study area, the major occupation of the people is business, social service and most of the populations are involve with student life. In this area low population has been involve with agricultural sector. The following table shows that about the occupation status in the study area.

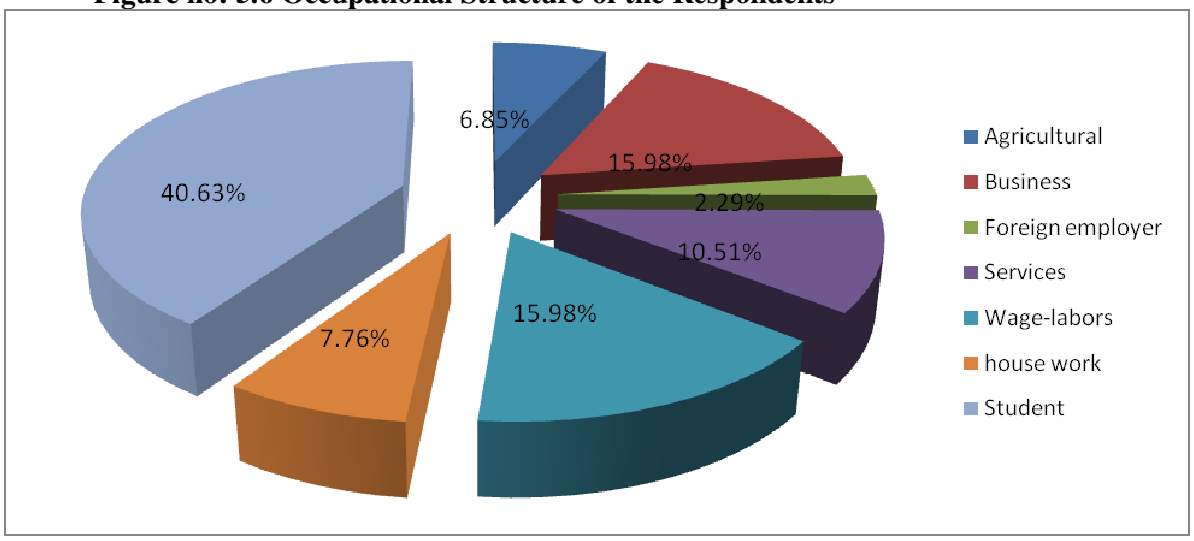
Table 5.5 Occupational Structure of the Respondents

	Male		**Female**		**Total**	
occupations	**Number**	**Percent**	**number**	**Percent**	**Number**	**Percent**
Agricultural	10	8.26	5	5.1	15	6.85

Business	20	16.53	15	15.31	35	15.98
Foreign employer	3	2.48	2	2.04	5	2.29
Services	20	16.53	3	3.06	23	10.51
Wage-labors	21	17.36	14	14.28	35	15.98
Public Building			17	17.35	17	7.76
Student	47	38.84	42	42.86	89	40.63
Total	121	100	98	100	219	100

Source: Field Survey Report, 2012

Figure no: 5.6 Occupational Structure of the Respondents



Above table and figures show that out of total population, 40.63% are spending their as a student. Out of the total population 15.98% are involved on the business; 15.98% are struggle the wage labor, 10.51% are involved on public service, 6.85% female are engaged with housewife and 2.29% people are related with foreign employer. Now data show that higher population is having on study and second is having business and wage labors.

5.7 Land Holding Pattern

Land is basic asset of the people where they set up house for shelter; operate for agricultural for food and land used to estlibished the different types of

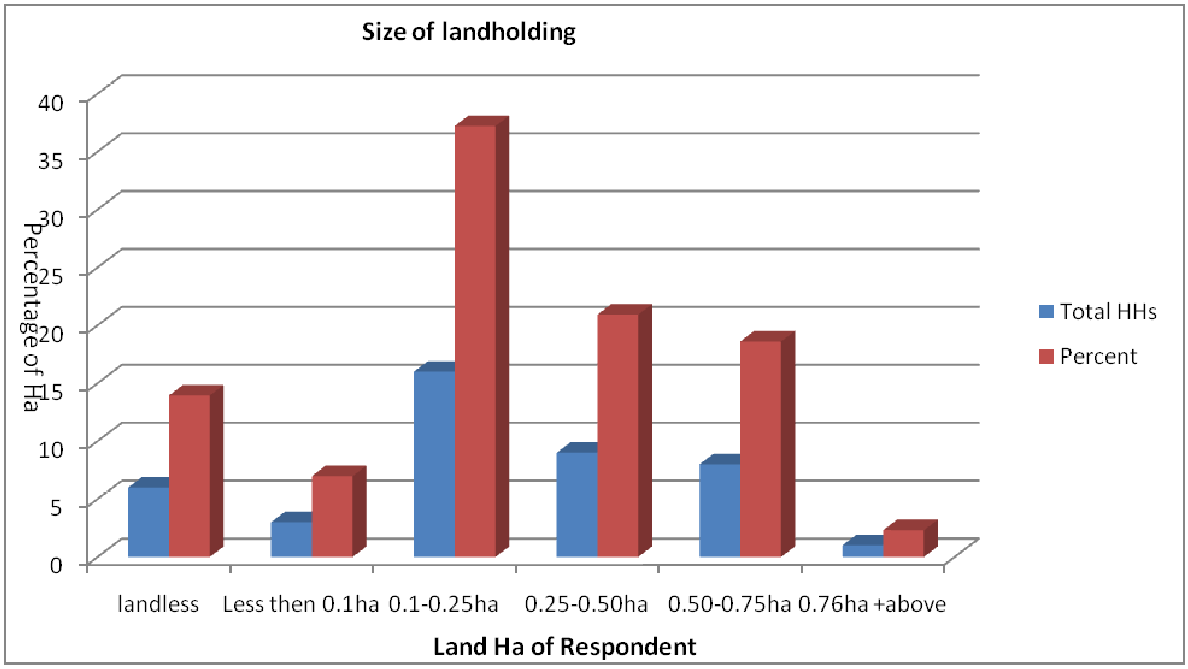
micro-industry. Higher land of the study area is occupied for housing and lower land for use agriculture. The following table shows the land holding pattern in the study area.

Table: 5.6 Size of Landholding

Land (Ha)	Total HHs	Percent
landless	6	13.95
Less then 0.1ha	3	6.98
0.1-0.25ha	16	37.21
0.25-0.50ha	9	20.93
0.50-0.75ha	8	18.61
0.76ha +above	1	2.32
Total	43	100

Source: Field Survey 2012

Figure no: 5.7 Size of Landholding



Above table and figure shows that majority of the household 37.21% were having land access on the less then 0.1-0.25ha. Out of the total population 20.93% household having land access 0.25-0.50Ha, 18.61% household having land access 0.50-0.75, 6.98% household have land access less then 0.1ha and 13.95% household was found landless in the study area.

5.8 Economic Status of the Respondent

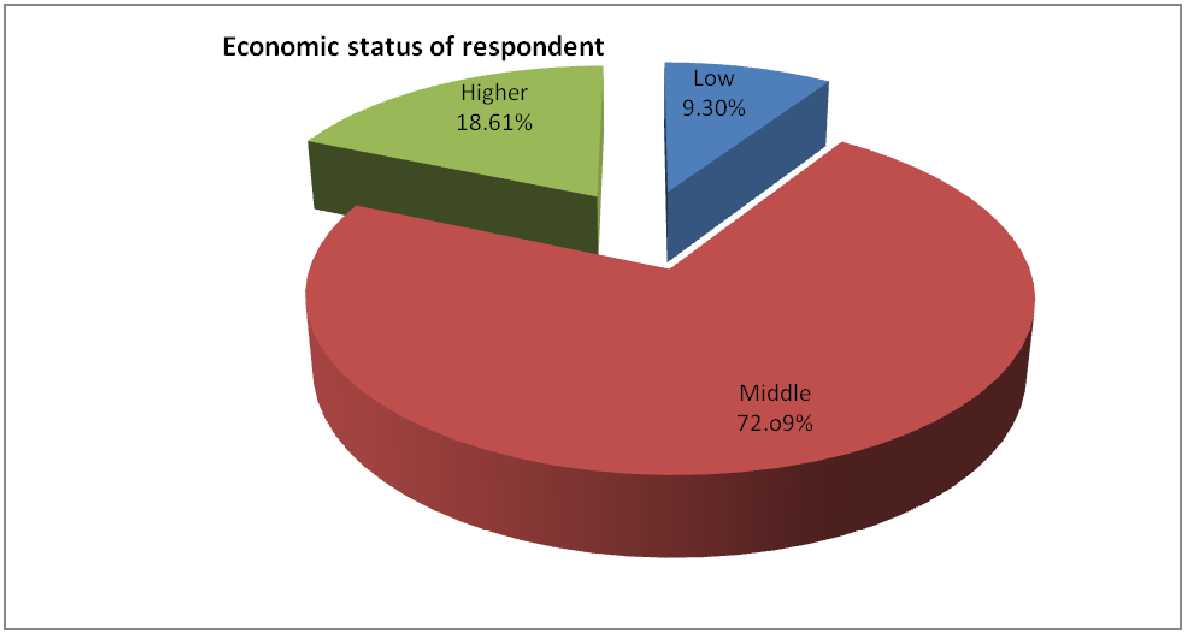
Economic status is a powerful source for gaining social status in the society. But it is very difficult issues how to measure the economic status of people. We can't found the stander instrument for class measure with used to major stander the income, social status, economic activities, landholding capacity and their use of modern instrument. Similarly stander used to respondent economic status measure in the study area. Most of the people in the study area are of middle class the following table shows the economic status in the study area the status measure with the UNO stander of the income, social status, economic activities, agricultural production, use of modern facilities, investment power, their land and household structure etc.

Table: 5.7 Economic Statuses of the Respondents

Economic Status	No. of Households	Percent
Low	4	9.30
Middle	31	72.09
Higher	8	18.61
Total	43	100

Source: field survey report 2012

Figure no: 5.8 Economic Status of the Respondents



The above table and figure shows that 72.09 percent household are belongs to the middle class economic status, while 18.61% of the respondents are belongs to higher class economic status and 9.30% are standing as low economic status.

5.9 Building Structure of the Respondent

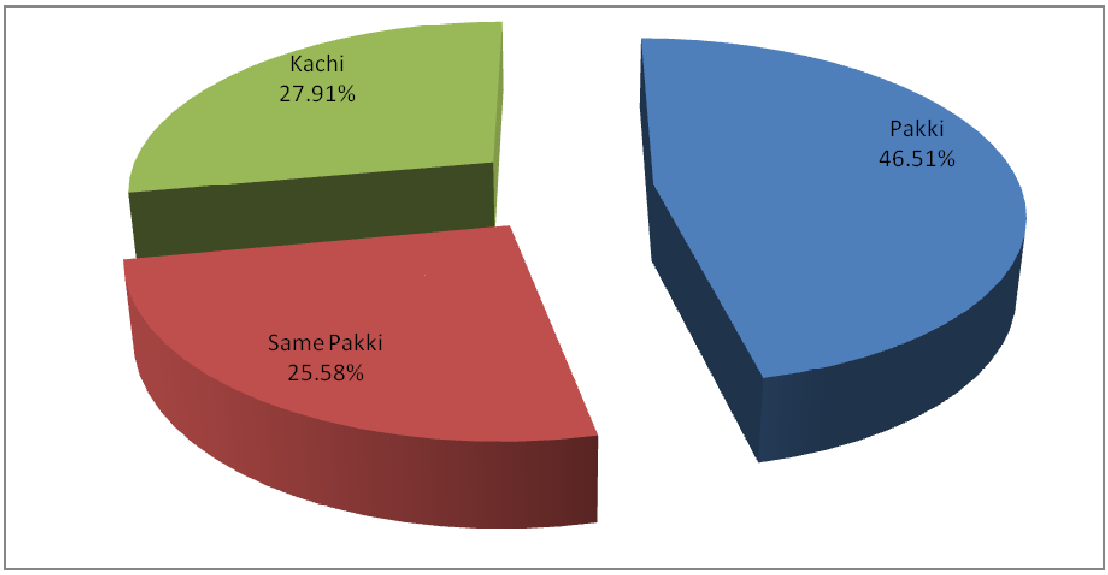
Building structure is one of the major factors showing standard of living among respondent status and prestige check in the society. Majority of the household have pakki and other HHs covered the semi pakki and kachi building. The table shows the structure of the building in the study area.

Table: 5.8 Building Structures of the Respondents

Structure	No. of Household	Percent
Pakki	20	46.51
Same Pakki	11	25.58
Kachi	12	27.91
Total	43	100

Source: Field survey report 2012

Figure no: 5.9 Building Structures of the Respondents



Above table and figure shows that majority 46.51% have been made pakki building structure, 27.58% have been made kachi building structure and 25.58% have been made semi pakki building structure.

CHAPTER- SIX

IMPACT OF THE INFRASTRUCTURE DEVELOPMENTS

These chapters define the outcome of the field research dealing about the impact of the infrastructure development. It includes impact of the transportation, drinking water, micro-industry; public building, impact of the electricity and impact of the

communication facilities are only mentioned to specify the further analysis of the respondent view. The impact of the infrastructure development on the society has been analyzed in terms of positive effect and negative effect before and after developed the infrastructure and related activities.

GDP rose of Nepal, 4.6% in 2010 and 4.5% in 2011, with to contribute by agricultural sector, out of 3.5%, industrial contribution national growth of 3.1% and growth rate in services sector of 6.9%. The government has set a target of achieving annual economic growth rate of 8.3% by 2016-17, of which 5% growth is projected in the agriculture sector and 9.7% in non-agriculture sector. The relatively high growth in agriculture in 2007-08 was due to a favorable monsoon that year. In order to maintain this growth in a sustainable manner, it would be crucial to improve irrigation which is currently extended to around two thirds of the land, of which less than half has year-round irrigation. GoN has embarked upon a plan to increase the total year-round irrigated area to 67% by 2027, at an estimated cost of USD 3.6 billion (at 2003-04 prices).

Within industry, manufacturing declined by 0.9% whereas electricity, gas and Water rose by 3.4%, construction by 3.1% and mining by 2.8%. Broadly the Infrastructure sector (which is dominated by hydro-power projects) has seen heightened activity. However, of the estimated exploitable hydro-power potential of 42000 MW (out of total estimated hydro-power potential of 83000 MW); installed capacity is only about 560 MW (only 40 % of the population has access to electricity). The target set by the government is to generate 4000 MW of electricity from hydropower 2027(2010/011 report) to meet the projected domestic demand. This by itself would need a fairly substantial amount of investment, estimated at about USD 6 billion.

Nepal is a natural scenic beautiful country in the world and it is play important role for developed the tourism sector. Tourism sector would have in generating employment, increasing foreign exchange earnings and maintaining external sector stability, it is crucial for Nepal to speedily develop. Tourism sector related with infrastructure because infrastructure is main baseline people to people, people to place and core to periphery relation developed. It is interconnected with infrastructure development. Tourism sector also has a strong role play in economic, given the significant positive relationship between tourism and infrastructure. If any areas were to look at the increasing levels of urbanization which puts presser in the resource with

urbanization put presser way of increased demands on physical infrastructure and urban services, the need for higher levels of investment in urban infrastructure (water supply and sanitation, solid waste management, education, healthcare facilities, urban transport and other urban amenities) is clearly evident. At present, around 50% of the urban population has access to water and sanitation services. This is targeted to increase to 100% by 2027.

According to the economic survey 2010/011 total length of road in Nepal is 12,455km. Total road out of the 6874km is blacktopped, 5036km is graveled and 9545km is earthen were constructed. There has been quantitative and qualitative increase in telecom services, daily new papers, TV transmission services, Radio broadcasting service and cable printing service in the country. The levels of investment would be further enhanced if the investment in urban areas is coupled with the need to provide similar facilities in scattered rural areas. Unlike hydro-power projects which have attracted substantial private sector interest for investment, urban infrastructure projects are almost entirely funded by Urban Local Bodies (ULBs) which are significantly cash-strapped and also unable to access finances from commercial banks and capital markets due to their poor financial condition.

Hence, financing of infrastructure projects across various sub-sectors from non-government sources would be a major challenge and would require a significant level of push and sustained support through investor-friendly

Until quite recently, municipalities has been formulated and implemented different types of infrastructure developed and services project in developing countries. With it have budget expender power, policy level power, decision making power and income generation power handed down from higher level of government to lower level. According to the municipalities survey report 2010, situation of the infrastructure development in the Narayan municipality total length of road is 117.63km, out of the 728m is blacktopped, 116km is graveled and 902m is earthen constructed. There has been increase the different types of communication facilities e.g. District post office 1, out of the total landline telephone distribution is 2048, CDMA is 700, prepaid is 19 , mobile user people are 700, cyber center 3, new paper 4 daily and 4 f.m. radio are services aviable etc.

Narayan Municipality has been distribution the total number of 1300 tap for drinking water In this study area. Out of them 814 is distribution of public tap and out of the 486 are distributions of private tap. Out of 2529 household are using the electricity facilities. Social services facilities are situated in the study area for education service institutions are 26. out of the 4 are higher secondary school, 4 are pulse two level school, 4 are lower secondary school and some other are primary school and boarding school etc. in this area health services, housing and micro- industry program are also lunching.

Infrastructure development mainly aim are providing basic needs for local people and investment the minimum by the local people and society. It is indirectly leads to poverty eradication by providing a better working, better living, stander environment create, physical healthily and human capital formation for the poor. Infrastructure development is to make the people self-reliant and capable of meeting their basic needs out of their own resources. It is extension market; the transport and communication has profound effect in establishing links between cores to periphery. It has been found that in spite of the existence of physical and social infrastructure in certain disadvantages groups like poor children and woman.

Government body and local people are discussing the gap between roadway development and utilization the local level resources for infrastructure development. It is encourage and facilitate financial intermediaries and provide security for investment the finance to infrastructure projects. It is address the need to special skills manpower for infrastructure development accepts. Hence, financing is main challenge for collection because investor always investment in the nonproducted sector so, it is hard work for agree to the invest in the infrastructure projects. Infrastructure projects are across various sub-sectors from non-government sources. It would be a major challenge and would require a significant level of push and sustained support through investor-friendly.

6.1 Infrastructure Development in the Study Area

Until quite recently, municipalities has been formulated and implemented different types of infrastructure developed and services project in developing countries. With it have budget expender power, policy maker power, decision making power and income generation power handed down from higher level of government to lower level. According to the municipalities survey report 2010, Narayan municipality has total length of 117.63km road, out of the 728m has blacktopped, 116km has graveled and 902m has

earthen constructed. There has been increase the different types of communication facilities e.g. one district postal office, 2048 landline telephone , 700 CDMA,19 prepaid, 700 mobile users, 3 cyber center, 4 daily new paper and 4 FM radio services etc are available in the municipality.

6.2 Essential Infrastructure Development

Infrastructures are essential component for human life. They are economically, physically, socially, geographically important. The respondents reported that transportation is a key component of the development. It plays important role to increase the linkage between people of one area with other side. Similarly, communication is key secondary priority order, which brings the changes for human life style by increasing link with other world people. So many infrastructures are required in the study area. Priority order kept the frequency model and order taken the same value of 1, 2 and 3. The table shows the priority order of essential infrastructure in the study area.

Table: 6.1 Essential Infrastructures in Priority Oder

Infrastructure	first priority order (HH)	percentage	Second priority Oder (HH)	percentage	Third priority order (HH)	percentage	Composite Value
Transportation	18	41.86	6	13.95	13	30.23	79
Communication	3	6.98	17	39.54	7	9.30	50
Drinking Water	12	27.91	5	11.63	11	25.58	57
Electricity	5	11.62	9	20.93	3	6.97	36
Micro-Industry	3	6.98	3	6.97	3	6.98	18
Public Building	2	4.65	3	6.98	9	20.93	21
Total	43	100	43	100	43	100	

Source: Filed Survey 2012

The above table shows that transportation is the top most essential infrastructure in the study area. The composite value shows that transportation has higher priority as much as the index is 79. Secondly, drinking water carries 57 index values whereas 50 index value for communication.

6.3 Major Infrastructure Development builds at last 5Years in the Study Area

Dailekh is less infrastructure developed district from the point of view of human development index 2004. Now a day infrastructure development activities are slowly increasing and their population are getting modern scientific facilities. All the VDCs have connected with road transportation facility, 55.73 percent household of the district have got access to safe drinking water and 19.86(2004 HDI report) percent households have toilet facility. Electricity, micro-industry, micro-finance, communication are other facilities gaining by growing number of households of the district. Dailekh district has total length of 244.23km road, out of the 78.09 has blacktopped, 128.37km has graveled, 116km has earthen and 27km has Under constructed.

Table: 6.2 Transportation activities in Dailekh District

S.N.	Name of Road	Class Ref no	Link code	BT	GR	ER	Total	UC
1	Upallo Syaule-Sain	NHH13	H1302	47.94	20.06	o.oo	68.00	00
2	Sain-Siradi	NHH13	H1303	14.74	0.20	3.06	18.00	00
3	Dailekh border-Siyakot-Dailekh	FRNF048	F04802	15.41	9.29	20.31	45.01	00
4	Tallo Dhugeshwor-Mathillo Dhungeshwor	FRNF144	F14401	0.00	8.22	0.00	8.22	00
5	Tallodungeswor-Dullu	FRNF182	F18201	00	00	18.00	18.00	0
6	Marpin-Chupra	MHH18	H1821	0	0	20.0	20	20
7	Dailekh-chhamgad R-dullu	MHH18	H1822			12	12	7
8	Dullu-Lainchaur-Jambukandh-Ramghat Rsatal-sain(District Border	MHH18	H1823	0.0	0.00	55.00	55.00	0.00
9	9	9	9	78.09	37.77	128.37	244.23	27.00

Source: MoPW/GoN (2010)

Table: 6.3 Major Infrastructure Developments in Narayan Municipality

infrastructure		Kilometer/Tap	HHs/micro-industry	Telephone line	years
Transportation	Total	117.63km			2066/067
	blacktopped	728m			066/067
	earthen	902m			066/067
	graveled	116k.m			066/067
Communication	Total			61130	067/068
	Landline			430	068
	Mobile/C.D.M.			700/6000	068
Drinking -water	Total	1300 tap			068
	Public tap	814 tap			2068
	Private tap	486 tap			2068
Electricity			2521		2068
Public Building			10		2068
Micro-industry			235		2068

Source: Municipality reports 2068/069

6.3.1. Impact of Transportation

Transportation is plays great role in socio-economic development by linking that area into rest of the world. When the transportation facilities increase in any place, it takes pace of overall development. Thus, transportation is considered as a basic infrastructure for development. Transportation is backbone for such types of infrastructure development. Transportation is main instrument to move the economy in track, increase the relation and understanding about the social structure in the study area. However, sometime transportation leaves negative impacts in social development. The study area is only connected directly with road transportation. The table 5.15 shows the positive and negative impact of road transportation development in the study area.

Table: 6.4 Impact of road Transportation

Area	Transportation	Positive impact	Negative impact
Bagawati tole to Ganesh tample	Road	Income increase and time save by the transportation facilities.	-sound pollution increased on society.
Bagawati tole to Ganesh tample	Road	Business activities increase link the road structure between cores to periphery.	- Increase the soil erosion and land slide.
Bagawati tole to	Road	To get different types of basic	-Accident

Ganesh tample		services and easy to supply local production.	increased, land pollution increased
Purano Bazer to shreethan temple	Road	Easy to sell agricultural production: the farmer started to sell their product directly to the market.	Loss of agricultural land, with reduce the production land.
Purano Bazer to shreethan tamaple	Road	Direct relation between producer and consumer.	-Increase the bad attitude in community.
Purano Bazer to shreethan tample	Road	Increase the access to the scientific facilities.	-Reduce the local production.
Chhatrabash to harsaini	Road	Easy to receive the daily uses instrument for people.	-increased the number of land slide
Chhatrabash to harsaini	Road	Increase awareness and information receive about the market mechanism.	- destroys the forest land. - The water sources decreased

Source: field survey 2012

The table 6.4 shows that there are positive and negative impacts of transportation development in the study area. Transportation is a main instrument to develop the relationship of the respondents with other respondent. Most of the respondent said that they are saving time uses to the transportation facilities. They had to walk long distances for bring the basic things and to sell their production before did not access the road network. They were discouraged for produced the agricultural production from not before have not access to the market facilities. Now most of the people are producing off farm vegetable in that area. However, due to the road construction, several accident, air pollution, land pollution, drying of sparing, flood and soil erosion are occurring in the study area which can be considered as the negative impact in the society.

6.3.2 Impacts of Drinking Water

The availability of drinking water facility in any area is also one of the most important indicators of infrastructure development. Present of natural resources is itself an indicator of development. How much benefit is gaining from the available water

sources and how it impacted on the socio-economic status of respondent, respondent has been reported hare. Impacts of drinking water have been analyzed to fulfill our objective of the study. Drinking water is on of the best indicator for infrastructure development in the society. It is taken the positive change the society with bring the negative impact in the society. Following table show the description about impact the drinking water facilities in the study areas.

Table: 6.5 Impacts of Drinking Water

DW Project Area	Positive Impact	Negative Impact
Dailekh Drinking water project	Easy Access to safe drinking water. Saving of time	Problem of appropriate and equitable distribution of drinking water in household
Dailekh Drinking water project	Prevent from different types of disease.	Lack of water in agriculture
Dailekh Drinking water project	improve human health	Problem the official works.
Ratemate Pidalne Drinking water project.	Agricultural production increase.	People tiredness increased.
Pidalne Drinking water project.	Lack of the common disease.	Conflict increase between settlements.
Drinking water project Kuikana	Increase production of fresh fruits and vegetable.	Ecological problem due to diverting water for drinking water
Drinking water project Kuikana	Increase the income save the time by the water factor.	Distribution mechanism is not proper; people have to wait long time only drinking water.

Source: Field Survey, 2012

Above table 6.5 define about the impact of drinking water facilities. It can be play the vital role improves in the society. Drinking water facilities are one of the main tool uplift the people's living status. It is save from the common disease, save the time to fetch the water, help the fresh fruits and vegetable, increase the agricultural production and it's useful for well health and well body safe, with it has bring some negative impact in the society; such as lack of water for the agricultural production, people always is feel the problem the appropriate and equitable distribution of drinking water, it is generate the conflict between the people to people and society to society, it is bring the relation change because people feeling show the selfish, people tiredness increase and Drinking

water is not proper distribution mechanism in the suppler people wait long time for one bucket etc.

6.3.3 Impacts of Communication

Information and communication sector is play the crucial role for infrastructure development, which play a vital role in overall development of the society. The task of bring positive changes on day-to day lives of citizen by providing continuity to development program in a sustainable manner depends on the effectiveness of communication. It is play the role reduce the poverty, as its development can lead to the development of social sector especially in the society. The following table shows the positive impact in the society by the communication facilities increase in the study area. They had told communication facilities is main tool to growth the people income and time saving because before the communication facilities; we are walking long distance to inform any message, but now easily only one call to send the massage for the people.

Table: 6.6 Impacts of Communication Network

Distribution areas	Communication facilities	Positive impact	Negative impact
Nepal telecom organization	landline	Relation increases with the other people	Non profit sector investment increase.
Nepal telecom organization	landline	Easily access to the modern facilities.	Cultural destroy and decrease cultural program
Nepal telecom organization	Landline	Economic increase by the communication because it is easy to sell the product.	Decrease the reproduction system.
Radio punchikosi F M	F M Radio	Time saving	It is increase the human facilities
Belashpure Daily	News papers	Income generation	Expends increases in man.
Radio Dhuraba Tara	FM Radio	New technology increases the relation.	Promoted the human conflict.
Radio punchikosi f m	F M Radio	Awareness develops the people to people.	Easily break the relation between youth and elder person.

Source: Field Survey, 2012

Above table define about the impact of communication facilities in the society. It can play the vital role to improve the society; communication is main tool increase the relation with the society and other people. It is brings the changes for people awareness, income generation, develop the economic status, and easily access the modern facilities and time saving. With draw the negative impact in the society; promoted the human struggles, easily break the relation, decrease the production system and increase the non profit sector investment.

6.3.4. Impact of Micro-industry

Micro- industry has been play important role in the creation of employment opportunities, poverty alleviation and inclusive development in the study area. It is baseline of the industries, create the meaningful self-employment. Micro-industry has been implementing program such as, micro-industry establishment and resources mobilization. It is creating more jobs for a local people and self employment. Micro-industry utilization the raw material, use the traditional skill, local instrument utilization and access to the local market. Following table indicate the positive impact in the society by the micro-industry facilities in the study area. Respondent say that about micro-industry is a backbone to create self employment, increase the income and utilization the local resource.

Table: 6.7 Impacts of Micro-industry

S.N.	Micro-industry	Positive impact	Negative impact
1	Poultry-farms	Self employment generate	Social problem
2	Poultry -frame	Increase the income	Lack of awareness
3	Shoe center	Used of the local skill	Low production higher resource used
4	Shoe center	Local resource utilizations	Lack of the raw material
5	Furniture industry	Used of local capital	Ecological problem
6	Furniture industry	Fulfill the Local market need.	Deforestation increase

Source: Field Survey, 2012

Micro-industry is main tool used of local capital, local market need fulfill utilization the local resource, increase the income and generate the self- employment.

Micro-industry has been taken the negative effect in the society. It is increase the deforestation, ecological problem, generate the social problem, low production huge utilization the raw material and misuse the raw material etc.

6.3.5 Impact of Public Building

Housing is important, because it provides privacy and security as well as protection against physical environmental. Good housing improves the health and the productivity of the occupants and thereby contributes to their wellbeing and to broader economic and social development. Housing is also a good investment and house owners often use their property to save. Housing is an important asset for its owner; it can generate income through home-based activities, and it can serve as collateral for loans. Following table shows that about the positive impact in the society by the household activities in the study areas. Tow people used the house in the rent of monthly income and remote area people only used the privacy for self security. It is increase the job opportunity, easily sale local production and generates the income.

Table: 6.8 Impacts of Public Building

Institution of investor	Name of the public building	Positive impact	Negative impact
GON	G B C building	Increase the job opportunity	Agricultural Land changes into building Area.
GON	G. B. C. building	Easily sale local production	decrease the production land with increase the people
GON + BoF	Local resources center	Income increase	Increase the crowed.
GON	Local resources center	Easley touch the government activities	Price increase when production decreases.
GON	C.D.O. building	Understand about the activities of Government	Price effect to the low income peoples who worked of the labor.
GON	C.D.O. building	Increase the value of land	It is influence the values of the Local production in the building area.
GON	Jail building	Living stander increase	It is generate the criminal and effect society environment.

Source: Field Survey, 2012

Above table define the positive and negative impact in the society, by the Public Building in the study areas. It is increase the living standard, uplift the land value,

understand the about the government activities, easily sale the local product and increase the job opportunity. With it is bringing the negative changes in the society; land exploited pollution increase in the society by the criminal activities, agricultural land changes into building Area and It is influence the values of the local production in the building area etc.

6.3.6 Impact of Electricity

Energy is one of the prime requirements for the overall development. Electricity (basically hydroelectricity) possesses great potentiality in Nepal due to its richness in water resources. It is one of the basic energy sources for every kinds of infrastructure, industry or service development. It is not only required for industrial development, it has great potentiality to local farmer for diversification and/or intensification of agriculture. So, it is the top required infrastructure together with transportation. It can give best result for the overall development. Electricity is the main way to develop an area and people standardard. It is more beneficial to increase the participation of people in development activities. It is bringing the positives change in the society, with drawback the negative impact in the society. The following table shows that about positives changes in the society by the electricity facilities increase in the study areas. According to the respondent electricity are main tools to increase the income, status and save the environment. Electricity facilities always have positive changes in the society increase. It is easily to work night, decrease the kerosene oil, however there are some negative consequences of it in the study area:

Table: 6.9 Impacts of Electricity

Electric ties project	Areas name	Positives impact	Negative impact
NEA	Bazer	Easy to night work	Reduce the labour income
NEA	Bazer	Decrease the kerosene oil	Accident increase
NEA	Bazer	Increase the income	Loss of income
NEA	Harsaini	Decrease the deforestation	Line distribution problem
NEA	Harsaini	Clean the house	Problem of light off
NEA	Koikana	Reduce the labours cost in the industry	Increase the people tiredness to use the tv and computer
NEA	Koikana	Clean the household environment.	Human facilities increase expenditure in the

			society.

Source: Field Survey, 2012

Above table define about the impact of electricity facilities in the society, where electricity facilities draw the positive impact to clean the environment, reduce the labor cost in the industry, decrease the deforestation, reduce the kerosene oil and easily work in the night, with it is draw the negative impact in the society; reduce the labor income, accident increase, loss of income, increase the people tiredness and human facilities increase in the society.

6.4 Problem and Prospect of Infrastructure Development in Nepal

Prospect is higher for infrastructure development in Nepal because here is available much raw material and manpower. Present Nepal has been suffering so many risks such as Socio-economic, Geographical Context, National Policy, Strategies and Plans for Local Infrastructure Development. Roads Statistics, electricity, micro-industry, household patterns, communication facilities and socio-economic are major Programs Under-implementation Institutional Arrangements Vision for Nepal. Infrastructure Development gaps relation between national level and local level with different institutional arrangement. Nepal is lest developed country in the world so, it is taken recently new possibility to increase the local to national level infrastructure development activities. With infrastructure development has create the many problems in society. It is creating problem in ecological, natural, human activities, social and cultural program etc. Developments are always seeing the positive changes in the traditional structure in the social pattern. It has improved the social pattern, people living stander, economical status, social prestige and increase in the income growth rate. But it is show the long term negative effect in the land structure, natural phenomena and social activities.

6.5 Infrastructure Scenario in Nepal

Nepal is covered the area and population size 74th in the world. It is taken the GDP growth rate size 42th and Human Dev Index 2nd poorest country in the world. Here are running the 6000 thousands rivers north to south parts. 4.5 Million People are Unemployed. There are Multi Language, Multi Ethnic, and multi-cultural, diverse

ecological and traditional religious system. Table shows the situation of the infrastructure development in the Nepal.

Table 6.10 Infrastructure Scenario in Nepal

Infrastructure	Name	Total Area	percentage
1 Irrigated and Cultivated Land	total	26.5 lakh ha.	20%
	Irrigable lands	17.6 lakh ha.	66%
	Irrigated lands	11.2 lakh ha.	62%
2 Sanitation water			76%
3 Railway covered		59 km	
4 Airport Paved		10 nos	
5 Road Net works	Road all weather	11,000 km	
	Total road Network	28,000 km	
	Paved road	4,000 km	
	Graveled and earthen road	24,000 km	
6 Electricity	Total Mega Watt	618 mw	
	Electricity Hydro Power	556 mw	.67%
7 Diesel covered		55 mw	40%
8 Fuel/Energy fossil		18 lakh	
9 LP Gas		225 Mt/day	
10 Telephone Line users		5.3million populations	
11 Internet Users		0.2 million people	

Source: Upadhyaya 2011(online papers).

6.6 Prospect of the Infrastructure Development

What prospect is made baseline estimated for the infrastructure development by Government? Such as, it is make estimated the cost for backwardness area and geographically remote area to develop. It is make the planning for developed the area and

continuous available the various facilities to manage the human settlements, modern transportation and communication network, hospital, hotel, departmental store, food court and environmental amenities. Infrastructures are a hybrid model to develop the any place. Which bodies is together participation in the infrastructure development: government and semi-government bodies, local residents, local authorities, developers, individuals and financial institutions. Government has helped to develop roads, telecommunication and other infrastructures where indicate the feather of infrastructure development and solving the future problem in the areas.

Nepal has more than 6,000 rivers and rivulets with an overall average annual run of 225 billion cubic meters of water flowing to the south. The gradient of Nepal, which varies from 200m above sea level in south to 8,848m in the north, enables considerable hydropower potential. We have hydropower generation capacity of above 43 GW, which is economically available. The actual capacity however, is much higher than this. Currently, we are facing load shedding, which shows that the electricity supply is not enough to meet demand. Furthermore, the annual country demand is increasing at about 50 MW per person, which future increases the demand in market. In addition to current demand, there is every possibility that huge industries like cement, steel rod manufacturing, trolley bus and cable cars, etc. Each of which needs high energy input, may develop once peace prevails in the country. This will further increase the demand of electricity. In addition, we have a power hungry two neighbor India and Chain, where there is also a high demand. India's and chain is huge market place for our electricity suppler. We have been only Lack of suitable policy and lack of the co-operation relation. Government can't includes international company, local resources user people, National stakeholder who need invest the hydro-power sector and used of remittance for infrastructure development sector.

Nepal is a geographically beautiful country. it is a enumerable obstrical for developed the transportation facilities, irrigation facilities, access out of health facilities, not receive the pure drinking water and out of self development. Government self can't do successful activities for develop with out help of the Public Private Partnership. The PPP would be the best model for infrastructure development. The governments are adopting this model to provide drinking water facilities to 271 emerging towns that we discussed earlier. Such partnership is already in practice in sectors like electricity and

education. Governments are also interested to for partnerships with private companies in build large scale for infrastructures in the major cities of Nepal.

6.7 Problem and prospect of Infrastructure Development in the Study Area

The private sectors are participating for basic infrastructure development. It has been taken initiative in sizeable physical infrastructure projects. Poultry farm and shoe center and herbs industry is one prominent exception in this regard. In fact this project stands testimony that Nepal's private sector can develop infrastructure projects into profitable ventures. Experts believe there are numerous possibilities where private sector investors can take infrastructure as an investment opportunity. Small and medium projects in urban areas related to parking space, waste management and drinking water are attractive for this sector and identified as easy to develop.

Government and some projects are collection information profitable returns similar to that of any other business very hard; they have been traditionally carrying out. Some believe that development projects can be independently carried out by the private sector while some disagree with it. Infrastructure development is the primary function and duty for the government. This underlines a great potential and demand for physical infrastructure. The private investment is all the more important in poor countries like Nepal, which have limited resources to invest in infrastructural sectors like power, telecommunication, and transportation. If the private sector highly invests in hydropower. The government can allocate more funds for sensitive sectors like health and education.

Dailekh is a remote district; it is situated in the mid-western region in the Nepal. It is a rich District for raw material and available resource. In this District infrastructure development movement increase resent age. Infrastructure development assume great important in Dailekh because it is predominantly by rural nature, the crucial linkages of infrastructure to economic growth, poverty alleviation, education increase, skill developed and human activities the little availability of infrastructure.

6.8 Prospect of the Infrastructure Development in Study Area

Prospect is developed of the transportation facilities to increase the production efficiency, generate the employment opportunities, providing future earning opportunities, Easley access the good and services, time saving, increase the health

facilities in the local people and relation developed with the government body, foreign people and other district.

Second infrastructure development of the communication is prospect developed in the study areas people and their skill. Due to improve in technology an mechanization, income generation increase the GDP, increase the awareness, peep the world in the room, easily known about the daily activities and connect the relation with the people.

Third infrastructure development of the electrification is prospect developed in the study areas people skill and facilities. It can include high connection costs, limited or no access to credit or loan terms that the poor from borrowing. Limited skills may prevent people from maximizing the benefits of electrification, pointing to the value of relevant skills. Cottage industries or small business initiatives may have limited benefits for the poor, particularly if goods produced face low demand or a started market. Micro-enterprise advisory services and pro-poor credit Opportunities can promote off-farm employment and the diversification of production into more profitable areas. Next we examine the aggregate impact of the stocks of infrastructure in society.

Prospect is developed of the drinking water facilities to reduce the communicable disease, physically strong and income increase. Water is an important as well as uses the drinking to cleaning. Every person easily use the statement “Health is wealth” healthy people do the good job. It is receive the good income.

Micro-industry is one of the key indicter for infrastructure development in the society and society people life status. It is use the local resources, local main power, local skill, and local instrument and seals in the local market. Micro- industry creates the job opportunity for the local people and utilization the local raw material.

6.9 Major Prospect of Infrastructure Development in Study Area

Society always optimistic for the positive prospect to the infrastructure development however, it is bring the vital change in geographical structure, social phenomena, in people status, nature and environment condition. Major prospect we can point out in the infrastructure development in the study area at future time, following point indicates:

a) **Availability of local raw material**: It is sufficient raw material production place, but not utilization the resources for development activities only use the local daily use and non production sector.

i) For the development of road transportation, there are locally available materials such as gravel, sand, timber etc.

ii) For the development of drinking water facility, the Lohare and Chhamghat khola can be of great source for drinking water in the study area, the volume of water in that khola is sufficient to fulfill the demand of drinking water in the study area.

iii) Some small stream and Kholas have potentiality to generate micro-hydro at that area.

iv) The timber available in the local forest can be used for the poles to extend telecommunication.

b) **Labour Force:** human labour input is a available in the study area, which can be considered as one of the prospect of the study area. The labour force is cheaper and easily available.

c) **People participation:** it is a great prospect in this area because in this area people are very helpful, kind and cooperative for the infrastructure development.

d) **Financial Support:** as compared to the other part of the country, the people also contribute locally for the development of the infrastructure. They have high willingness to pay for the infrastructure. The key informants reported that the people in the study area can contribute up to 50 percent to some of the infrastructure development. In some cases the municipality is doing programmes in sharing basis with local people and municipality.

e) **Huge land use:** Agricultural is a backbone in our society upliftement, same in the study area on of the major prospect is agricultural because there is sufficient land available, but only lack of the irrigation, land management, skill manpower, lack of suitable land use policy and land leave the useless. Food is main power for man alive so use the land production increase easily.

f) **Place Utility:** There are so many important place like Punchadewal, KothGadhi other religious temple like Jowal Debi for the development of religious and

cultural tourism. Similarly, it is also a place of natural beauty and scenic attraction in and around the study area.

6.10 Problems of Infrastructure Development

Mainly problem has been occur lack of investment as for as weak of the financial condition of our country for infrastructure development. Next one is not study about the core value of the environmental condition in the country. Infrastructure development project has been playing the vital role to generate problem of the nature and social pattern in the future. Policymaker is not understood about the local people problem and social structure. Any programmer can't address the priorities for community people behaviors and did not identification problem of climate change. It is not measures and mitigation of the impact in the society and people life status by the infrastructure development.

Financial issue is a biggest problem for the infrastructure development. So, Nepal is facing the finance and investor problem in the infrastructure development sector. With the interest rate tremendously high, the rate of return becomes too low because there is not clear government policy, not a security, does not make the market network for investor attraction to invest in the infrastructure project. Therefore higher incomes persons are afraid of invest for infrastructure project. Nepal is facing several problems such as weak of the policy, lack of the institutional co-ordination, lack of the co-ordination with the public private partnership and constraints of the bank lone draw for infrastructure development programs. Investor can't see the profit to the infrastructure sector because all part surrounding the political and government clime with pay the higher cost for the political party and low cost invest the infrastructure development. Increase the transportation sector to show mainly the different weakness: Lack of integrated sector policies and an effective implementation strategy for the development of roads. It is weak institutional capacity of the local agencies, inefficient incentive structure, poor monitoring and the lack of accountability of the public sector agencies.

In the hydropower sector, the major problem is the constant price offered by Nepal Electricity Authority (NEA) to independent power producers for the last ten years while the bank interest rates are going up continuously. It is weak domestic resource mobilization and heavy dependence on foreign assistance in the road sector. About 60 percent of development expenditure for roads is met from donors' contributions.

Inadequate and irregular road is maintenance resulting in the rapid deterioration of road condition sand quality. There is Poor accessibility in the remote hill and mountainous districts of the country, and insufficient connectivity in 5 district headquarters, which are not connected by road. Institutions are Poor maintenance systems for motor vehicles which lead to an increasing number of polluting vehicles and road accidents. High transportation costs for Nepalese exports due to transit and high vehicle operating costs. Unreliability of freight transit services, as the average transit time through India varies from 3 to 8 days. The backlog of road maintenance is ever increasing, rendering the present local road network unserviceable.

According to the respondent point of view in the study area, there are some problems in infrastructural development such as increase the flood and soil erosion, drought the water resources, environment impact, increase the road accident and exploited the cultural program, reduce agricultural land etc. Similarly, they also reported of increase expenditure, exploit the resources, reduce the agricultural production and increase the dependence rate, increase sound pollution, increase the disease, conflict increase in the society and increase the human bad habits etc.

Infrastructure development is considered as a panacea for bringing positive change in the society. However, its sometime brings great problems in the society, environment, ecological balance, natural resources, cultural activities and geographical structure etc. There are some negative problems of infrastructural development in the study area, which is presented in the table 6.11.

Table: 6.11 Major problems in the Study Area

Problems	Top Problem	Second Problem	Third Problem	Composite Problem
Flood and soil erosion increase.	15			45
Declining water source	12			36
Environmental impact	9			27
Accident increase	7			21
Expands Increase		11		22
Exploited the Resources		17		34
Reduces the Agricultural		5		10

production				
Increase the Dependences Rate		10		20
Sound Pollution increase			19	19
Increase the Social Crime			13	13
Increase the different diseases			6	6
Resources conflate increase with shareholder.			5	5
Total	43	43	43	

Source: Field Survey 2012

The above table shows that infrastructure development activities bringing some problem in the society. It is calculation about the problem with included the respondent view, e.g flood and soil erosion, declining water sources, environmental problems, accident, and resource decline are the major problems in the study area. Similarly, sound pollution, increase the disease, conflict in the society and increase human bad habits etc.

Chapter- Seven

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter deals with many major ideas and message with summary, conclusion and recommendation of the findings of the study. The recommendation put forward the board ideas with appropriate approaches, methods and techniques to stop much and less infrastructure impact in the Country.

6.1 Summary and key finding

- Infrastructure development has covered many fields like transportations, education, communication, electrification, industrialization, public administration, drinking water, housing, to build the many hydro-power, modern scientific instrument and various types of human development activities with direct related the socio-economic activities in the country.
- Infrastructure situations of the municipality lie in center and highly centering the infrastructure distribution. Infrastructure distributions are not equal core side developed more then the periphery. Core side people involve with the modern types of occupation and periphery areas people involve with the agricultural and labor works.
- Cast/ethnic groups are living with kindly, co-operation and collaboration in study areas. They have equal and friendly distribution system of opportunities and facilities. Most of the people in the study area are Chhetri, Thakuri, Dalit and Brahman. All of the selected respondent believe on Hinduism and speaks Nepali language.
- Among the 43 household the total population was found 219. Out of them 55.75% were male and 44.25% were female. The data shows that the average family size of the study area is 6 persons per household.
- Among 219 total population from 43 sample households, 7.31% were 0-5 years 8.22% were 6-10 years, 13.24% were 11 -15 years,12.79% were16-20, 53.88% were

21-60 and 4.57% above 60 years. Out of them 56.16% were married, 42.93% were unmarried and .91% were widow.

- Among total population from sample households, 13.69% were illiterate, 5.94%were literacy, 19.64% having primary level, 14.16% having secondary level, 23.74% having higher 13.69% having I. A. level, 7.31% having bachelors level and only 1.83% were having Mater level education.
- From the analysis, it was found that majority of the population are having Student life and business occupation. Out of total, 40.63% were involve in student life, 15.98% having business activities, 15.98% having wage labour, 10.51% having the jobs inside country, 7.76% having housewife, 6.85% were applying the agricultural occupation and 2.29% were foreign employer.
- About the 13.95% total households in the study area are landless, 6.98% household's occupying less then 0.1 hector, 37.21% occupying 0.1-0.25 hector, 20.93% occupying 0.26-0.50 hector,18.61% occupying 0.51-0.75 hector and 2.32% having above 0.75 hector land owners. It shows that land availability is high but productivity is low due to unmanaged agro farming system.
- Infrastructure developments play an indirect but crucial role in the development Process through promotion of growth by increasing the productivity, create the job opportunity and changes the living stander in this areas people who directly involve the infrastructure activities.
- What prospect is made baseline estimated for the infrastructure development by Government? Such as, it is make estimated the cost for backwardness area and geographically remote area to develop. It is make the planning for developed the area and continuous available the various facilities to manage the human settlements, modern transportation and communication network, hospital, hotel, departmental store, food court and environmental amenities. Infrastructures are a hybrid model to develop the any place. Which bodies is together participation in the infrastructure development: government and semi-government bodies, local residents, local authorities, developers, individuals and financial institutions. Government has helped to develop roads, telecommunication and other infrastructures where indicate the feather of infrastructure development and solving the future problem in the areas
- The private sector is participation in the development for basic infrastructure in the study area. It has been taken initiative in sizeable physical infrastructure projects.

Poltry farm and shoe center and herbs industry is one prominent exception in this regard. In fact this project stands testimony that Nepal's private sector can develop infrastructure projects into profitable ventures. Experts believe there are numerous possibilities where private sector investors can take infrastructure as an investment opportunity. Small and medium projects in urban areas related to parking space, waste management and drinking water are attractive for this sector and identified as easy to develop.

- According to the municipalities survey report 2010, situation of the infrastructure development in the Narayan municipality total length of road is 117.63km, out of the 728m is blacktopped, 116km is graveled and 902m is earthen constructed. There has been increase the different types of communication facilities e.g. District post office 1, out of the total landline telephone distribution is 2048, CDMA is 700, prepaid is 19 , mobile user people are 700, cyber center 3, new paper 4 daily and 4 FM. radio are services available etc.
- In this study area distribution the total number of tap for drinking water are 1300. Out of them 814 is distribution of public tap and out of the 486 are distributions of private tap. Out of 2529 household are using the electricity facilities. Social services facilities are situated in the study area for education service institutions are 26. out of the 4 are higher secondary school, 4 are pulse two level school, 4 are lower secondary school and some other are primary school and boarding school etc. in this area health services, housing and micro- industry program are also lunching
- About the 41.86% total household were having first priority order of transportation in study area. 27.91% were having a first priority order of Drinking water, 11.62% were having priority order of Electricties, and 6.98% were having priority order of communication and micro-industry and 4.65% having the priority of public building.
- Infrastructure development has created different types of problem in the society. Such as Increase the flood and soil erosion, drought the water resources, impact the environmental situations, increase the road accident and exploited the cultural program. Respondent report is one of the problem increase expenditure, exploited the resources, reduce the agricultural production and increase the dependence rate in the study area. And it is increase sound pollution, increase the disease, conflict increase in the society and increase the human bad habits etc.
- Most of the respondents said that about the transportation facilities saving the time because before the transportation facilities; we were walking long distances for daily used thing.

Increase the economic status before the transportation facilities; we had produced only for house use not for sales.

- The drinking water facilities can be play the vital role to improves in the society structure. Drinking water facilities is one of the main tool uplift the people living status. It is safe the common disease, save the time to lost bring the water, help the fresh fruits and vegetable, increase the agricultural production and it's well health and well body safe, with bring the negative impact in the society; relation decrease, people tiredness, problem create official and problem for distribution
- Information and communication sector, which is play a crucial role for infrastructure development. It is play a vital role in overall development in the society. The task of bring positive changes on day-to day lives of citizen by providing continuity to development program in a sustainable manner depends on the effectiveness of communication. It is play the role reduce the poverty, as its development can lead to the development of social sector especially in the society.

When build the electricity facilities any areas can be outcome best result for the overall development. Electricity is the main way to develop the area and people standard. We have hydropower generation capacity of above 43 GW, which is economically available. The actual capacity however, is much higher than this. Currently, we are facing load shedding, which shows that the electricity supply is not enough to meet demand. Furthermore, the annual country demand is increasing at about 50 MW per person, which future increases the demand in market. In addition to current demand, there is every possibility that huge industries like cement, steel rod manufacturing, trolley bus and cable cars, etc. Each of which needs high energy input, may develop once peace prevails in the country. This will further increase the demand of electricity. In addition, we have a power hungry two neighbor India and Chain, where there is also a high demand. India's and chain is huge market place for our electricity suppler. We have been only Lack of suitable policy and lack of the co-operation relation. Government can't includes international company, local resources user people, National stakeholder who need invest the hydro-power sector and used of remittance for infrastructure development sector. Electricity is main tools to increase the income, status and clean the ecology. An electricity facility is always taken positive view in the society increase. It is easily to work night, decrease the kerosene oil.

6.2 Conclusion

This study was conducted as an investigation on socio- economic impacts of the infrastructure development in the study area with problem and prospect of infrastructure development. It has also made a comprehensive analysis with reference to the functional establishment of core centers and infrastructure pattern estimated in Narayan Municipality Dailekh District.

With the help of different literatures and field study, we come to the conclusion that infrastructure development can bring drastic change in socio- economic scenario of any social and economic realm. For the least developed, landlocked and mountainous economy like Nepal infrastructure development plays a major role in attaining the development goals. Local participation and initiation are seen as a significant agent for development. This seems to be the new experience in the infrastructure development activities in our study area where are slowly increase the different types of infrastructure activities in the study area.

Infrastructure development have been depend under the human activities and it has change the land pattern in the study area, measure the social status of people is certainly impact by communication facilities but this is not the total fact that each and every person access. Road net work has bought different places, relation developed the other place and it is closer with socio- economic activities. Moreover Nepal is make landlocked nature and hilly topographic setting in the world. More specific hilly district and its remote and distant places connect from transportation network and can be included with the road system. Development and evolution of core centers is definitely influenced by transportation network but this is not the absolute fact that each and every center increases. Location aspects, geography and other relevant factors also are determinant more or less.

Micro-industry is definitely played the vital role respondent activities, economic status, social prestige and living standers. With it is an important factor to create the opportunity, income increase, utilization the local skill and used the local resource, but it is not the all fact that each and every infrastructure development activities. Drinking water is a one part of the socio-economic changes and people well being because it is important indicator persons safe the disease. It is safe the common disease,

save the time to lost bring the water, help the fresh fruits and vegetable production and increase the agricultural production. Electricity facilities any areas can be outcome best result for the overall development. Electricity is the main way to the development of the area and people stander, but electricity is playing such types role for infrastructure development. It is more beneficial to under development and less increase to participation.

Society always optimistic for the positive prospect to the infrastructure development however, it is bring the vital change in geographical structure, social phenomena, in people status, nature and environment condition. Major prospect we can point out in the infrastructure development in the study area at future, such as sufficient local raw material only lack of the policy and utilization, lack of transportation facility, raw material use to for public building in the study area. Next prospect has occurred for infrastructure development in the study area; Sufficient water resource, use to drinking water, use for irrigation, estlibshed the micro-hydropower and highly people participation in the infrastructure activities. With infrastructure development activities is bringing some problem in the society. It is composite problem calculation; flood and soil erosion, declining water sources, environmental problems, increase accident and resource decline are the major problems in the study area. Similarly, sound pollution, increase the common disease and conflict increase in the society.

Finally, though the impact of infrastructure development in the society. It has been found very significant; it has revealed the very fact that Nepal should adopt a critical attitude on it. Infrastructure developments is move the society and plays the vital role for the socio-economic upliftment with show the problem and indicate the prospect of the resent age change the status of the respondent. There are some changes in cultural, social attitudes, natural, geographical structure, ecological conditions and economic activities of the people.

6.3 Recommendations

On the basis of the findings of the study following recommendation were done:

1) Locally available natural resources and manpower should be mobilized and utilized more efficiently and effectively that are available in community area.

2) Local environment should be protected and a better microclimate situation should be created within the study area.
3) Role and regulation should be well implement for construction of public buildings by the local body.
4) The width of the road should be converted to the double lane paved road.
5) Construction of culvert over the small khola and dhal in the road areas.
6) People's should be participation in maintenance, control and use of the road by The Government encourage
7) A forestation, reforestation and compensation program along the road catchments should be addressed by GOs and NGOs authorities.
8) Government should be involved the regular monitoring and evaluation in communication and drinking water sector, with private sector encourage the investment in the infrastructure development activities.
9) Government should be maximum utilization the local resources and manpower in the infrastructure development sector.
10) Weakness and threats should be reduced and the electricity development should be one of the development policies of a Social economy.
11) Prepare Municipality profile address with the problems and prospects.
12) Government should be managing finance and investment for increase communication network by private sector.
13) Government should be managing the loans for livestock farming and cottage industry.

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Annex 3

Household Survey in the study area head of the household Name

.N.	Name of Head	Number of Family	ge	ex	Marital Status	Education	Occupation	Toal ward no 1
	Nanad Bikram B.C.	4	0	ale	Married	I. A.	Teacher	Bazer
	Top bahadur Shing	8	2	ale	Married	S. L.C.	Leader	Bazer
	Padam Nepali	4	0	ale	Married	8 Class	Trade	Bazer
	Gokul Nepali	5	0	ale	Married	Litters	trade	Bazer
	Lalita Nepali	6	0	emale	Married	Litters	Trade	Bazer
	Mitathu Nepali	4	9	emale	Married	8 class	Sew and	Bazer
	Indra Bahadur Nepali	10	0	ale	Marrid	Litters	Sew and	Bazer
	Nandakala Nepali	5	3	emale	Married	Litters	Sew and	Kuikan

	Kusnana Nepali	10	0	emale	Married	Illiteracy	Sew and	Kuikan
0	Kadh Bahadur Nepali	6	6	ale	Married	10	Trade	Kuikan
1	Khemaraj Nepali	4	2	ale	Married	Illiteracy's	labors	Kuikan
2	Padham Nepali	4	0	ale	Married	8 class	labors	Kuikan
3	Ganga Nepali	5	0	emale	Married	Litters	Sew and	Kuikan
4	Bhakat Bahadur shahi	5	2	ale	M	S.L.C.	Leader	Kuikan
5	Shabitri Mall	5	0		M	S.L.C.	Leader	New Bazer
6	Ram Bahadur Shahi	7	3		M	S.L.C.	officer	New Bazer
7	Ram Bahadur B.C.	7	4		M	S.L.C.	Teacher	New Bazer
8	Top Bahadur Sunar	5	6		M	10	Sunar maker	Purano Bazer
9	Pabitra Kumari Thapa	4	8		M	B.ed	Trade	Jugepani
0	Lalit mall	4	0		M	B.A.	Teacher	Purano Bazer

1	Deepak K. C.	4	8		M	B. A.	of ficer	P urano Bazer
2	Deepak Adhikari	4	5		M	I. A	jo ber	N ew Bazer
3	Indra Bahadur Thapa	5	8		M	I. A	R CIW	R anidhar
4	Suman K.C.	4	3		M	I. A.	Tr ade	P urano Bazer
5	Pushapa Shareth	5	2		M	S. L.C.	Tr ade	R anidhar
6	Man Bahadur Khan	5	5		M	Li tters	Tr ade	R anidhara
7	Padham J. C.	9	8		M	S. L.C.	K haridar	R anidhar
8	Chandra Bahadur Shahi	8	2		M	1 0	Tr ade	R anidhar
9	Saram Bahadur Shahi	4	2		M	S. L.C	T eacher	R anidhar
0	Susmita shahi	4	0		M	S. L.C.	Tr ade	P urano Bazer
1	Ramesh Basnet	3	5		M	1 0	Tr ade	H arsaini
2	Lalit Shing	5	0		M	Li tters	tr ade	H arsaini

3	Sete Bisath	5	3		M	I. A	T eacher	R anidhara
4	Bedh Bahadur G. C.	10	6		M	S. L.C	S ectary	
5	Sarita Thapamagar	5	0		M	8 class	F urnisher	
6	Bogendra Bahadur Basnet	6	6		M	Ill iteracy	A gricultur al	
7	Punde Prasadh Sharm	3	1		M	B. A.	jo b	S hreethan
8	Nand Shing	6	5		M	10	Tr ade	S hreethan
9	Tulsi Shereth	4	5		M	Ill iteracy	tr ade	S hreethan
0	Bal Bahadur Thapa	4	2		M	S. L.C.	S ectary	R anidhara
1	Man Kumari Besath	3	3		M	Ill iteracy	A gricultur al	S hreethan
2	Heri Kirsan Thapa	5	0		M	I. A.	T eacher	J ugapani
3	Shayam Thapa	3	4		M	I. A.	A gricultur al	K uikan

Trivhuvan University

Central Department of Rural Development,

Kirtipur, Kathmandu, Nepal

Household Survey

Impact of Infrastructural Development on Society in Narayan Municipality, Dailekh

Name: ……

Caste: …….

Religion: …….

A. Household Information (write HH head in first row)

1. Family Structure

Name	Relation	Age	Sex	Marital status	Education	

2. How much land does your household hold?

Ans a) landless

b) Less then 0.1ha

c) 0.1-0.50ha

d) 0.50-0.75ha

e) 0.76 above ha

3. Structure of Building
   a) Pakki
   b) b) Semi-Pakki
   c) c) Kachhi

4. What is your economic status in the society?

Low ▫

Middle ▫

High ▫

B **Status of Infrastructural Development**

5. What is the major infrastructure built in your community (last 5 years)

Infrastructure	Built year	Built by	Local participation	Positive impact (priority order)	Negative impact (priority order)
Transportation				1. 2. 3.	1. 2. 3.
Drinking water				1. 2. 3.	1. 2. 3.
Household				1. 2. 3.	1. 2. 3.
Electicties				1. 2. 3.	1. 2. 3.
Micro-industry				1. 2. 3.	1. 2. 3.
Communication				1.	1.

				2. 3.	2. 3.

6. What are the major problems do you think for infrastructural development

   1.

   2.

   3.

7. What are the essential infrastructures for your community?

   Ans a) Transportation

   b) Communication

   c) Drinking Water

   d) Electricity

   e) Micro-industry

   f) Household

8. Why these infrastructures are needed?

   Ans a)

   b)

   c)