IMPACT OF SMALL RURAL INFRASTRUCTURE ON LIVELIHOOD:

A Case Study of Kudari VDC, Jumla District, Nepal

A Thesis Submitted to
The Central Department of Rural Development,
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For the Degree of the Master of Arts (M.A.) in Rural Development

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RECOMMENDATION LETTER

The thesis entitled **Impact of Small Rural Infrastructure on Livelihood: A Case Study of Kudari VDC, Jumla District** has been prepared by Bishal Basnet under my guidance and supervision. I, hereby, forward this thesis to the evaluation committee for final evaluation and approval.

Bhumiswar Sharma
Thesis Supervisor
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APPROVAL LETTER

The thesis entitled **Impact of Small Rural Infrastructure on Livelihood** submitted by **Bishal Basnet** in partial fulfillment of the requirements for the Master's Degree (M.A.) in Rural Development has been approved by the evaluation committee.

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DECLARATION

I hereby declare that the thesis "Impact of Small Rural Infrastructure in Livelihood: A Case study of Kudari VDC of Jumla District" is submitted to the Central Department of Rural Development, Tribhuvan University is entirely my original work prepared under the guidance and supervision of my supervisor. I have made due acknowledgement to all ideas and information borrowed from different sources in the course of writing this thesis. The result of this thesis has not been presented or submitted anywhere else for the award of any degree or for any other purposes. No part of the content of this dissertation has been published in any form before. I shall be solely responsible if any evidence is found against my declaration.

Bishal Basnet

Date: April, 2016

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Mr. Bishal Basnet

March, 2016

ABSTRACT

This study entitled "Impact of Small Rural Infrastructure in Livelihood: A Case Study of Kudari VDC, of Jumla District" was conducted with the objectives to find out the impact of small rural infrastructure in livelihood of Kudari VDC, to analyze the level of benefits taken by deprived and vulnerable groups of people from the program and analyze the levels of opportunities from small rural infrastructure to deprived groups. To complete this study exploratory and descriptive research design is used because this study has focused on impact of small rural infrastructure in livelihood. This study was mainly based in the primary information. The data were collected using the structure questioners for Household Survey and for key Informant interview. Focus Group Discussion was done through unstructured questioners.

The study has been completed by selecting 3 wards (2, 4 & 5) purposively from Kudari VDC of Jumla District. The total households of selected wards are 220. Among them, all the households were found benefited directly or indirectly. Out of 220 households, 76 households were selected by sampling randomly method under the probability sampling. Total population of sample household was 526 out of them 271 were male and 255 were female. In sampled household 16.9 percent of female makes the decision of house and 22.1 percent male dose, remaining 61 percent both male and female make decision of house, 43.42 percent households main source of income was farming followed by 17.1 percent employment and business. Among the sampled households 49 percent households approximate annual income was found less than 50 thousand and 51 percent households have more than 50 thousand annually. In terms of infrastructure 22.7 percent mule/foot trial has been built than 21.6 percent drinking water, 13.7 percent toilet, irrigation 17.3 percent and 17.13 percent rural road has built in study area 10.6 percent was school construction, only 0.8 percent fruit orchard and 0.4 percent of land improvement has been built in community. To build these infrastructures in study area different government, non government agencies and local community have provided the inputs like cash materials and labour. Here, 83 percent cash has provided by I/NGOs, 99 percent labour by community and 67 percent and 51 percent materials was provided by DDC and VDC.

Survey found that 34.22 percent entire targeted community has been benefited, 55.26 percent told most of the targeted community has been and 10.52 percent has told few

people were benefited. Regarding the impact in seasonal migration 54 percent of seasonal migration has found decreased in study area. Similarly 31 percent respondent response that it has increase a availability of food in markets, 24 percent told variety of food also have been increase, 19 percent response that new markets were established in study area where 16 percent told that numbers of traders has been increased, 26.9 percent people of study area said that they have done more economic activities, 19.2 percent told they have got transportation facilities where 18.4 percent of road accident as well as 11.1 percent households expenses was increased and 6.4 percent people said deforestation is also the change bought by infrastructures, however 17.9 percent people told access in market was increased. It shows that changes bought by infrastructure development is positive as well as negative too this which is directly related to livelihood of the people. In case of benefits that the people have got from developed infrastructure, 25 percent of people income has been increased in case of health and sanitation 21.8 percent people said that it has improved, 16.5 percent of production of cash crops have been increase, 10.9 percent people says this project has reduce a seasonal migration where 14.1 percent people argue that employment opportunities have been increase and lastly people argue that 11.7 people have been improved in market access.

All the respondents of study area have very positive attitudes towards the developed infrastructures that have built in their community. It has very positive impact on livelihood of people which has provide them alternative to live and make easier on existing livelihood strategy of people of study area, But it would be more better if government agencies would have taken more responsibilities rather than non governmental agencies.

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS / ACRONYMS

CBS	**Center Bureau of Statistic**
DDC	**District Development Committee**
DFID	**Department for International Development**
FAO	**Food and Agriculture Organization**
FGD	**Focused Group Discussion**
GON	**Government of Nepal**
HHs	**Households**
INGO	**International Non Governmental Organization**
KEP	**Karnali Employment Program**
KII	**Key Informant Interview**
LGCDP	**Local Government Community Development Program**
NO	**Number**
PAF	**Poverty Alleviation Fund**
RCIW	**Rural Community Infrastructure Work**
SERDeN	**Society of Engineers Rural Development in Nepal**
SPSS	**Statistical Package for Social Science**
UN	**United Nation**
UNDP	**United Nation Development Program**
VDC	**Village Development Committee**
WB	**World Bank**
WFP	**World Food Program**

CHAPTER-ONE

INTRODUCTION

1.1 General Background

Nepal is landlocked country located in south Asia between china in north and India in south east and west, where total land area is 147181 s.q km, length 885 km (east to west) and width non-uniform mean of 193 km north to south. Ecologically it is divided into three ecologically it is divided into three ecological regions Mountain Hill and Terai where total population is 26494504 with annual growth rate of 1.35% (CBS, 2011). It has a great variety of topography, which is reflected in diversity of weather and climate. Nepal is predominantly agriculture country, according to World Bank 74% population is engaged in agriculture in such a scenario Nepal has not able to take benefits from agriculture and it has shown negative impact on process of development and livelihood of rural people. So modernization commercialization of agriculture is most essential thing for development of Nepal for this small rural infrastructure development first haggle because rural population was last measured at 81.76% in 2014 of total population in Nepal.

In Nepal, small rural infrastructure development practices formally was started from the first comprehensive program known as Tribhuvan village development program it was initiated in 1952 even before the lunching of the first five year plan in 1956 with the guidance and support of two major donors the USA and India. This program was divided into three levels and the minimum level was called “nucleus development” which aims to improve of local infrastructure and facilities like school, play ground, well and roads. Before this also in Nepal small rural infrastructure development was been practices locally by the people and they were known as” *kulo banaune”* “*goreto banaune”* etc. Politically Nepal has been divided into different phases (Rana Regime, Democratic Period, Panchayet Period, Restoration of multiparty democracy & we are on practice of Republican Democratic period since 2015) and in every phases the development of small rural infrastructure have been practice and it's still going on but due to lack of coordination between different agencies and local people the Nepalese rural people are out of its benefits that they deserve. So scene the long time Nepal economy has not been turnover and so we Nepali people are categorize into vulnerable. In context of Nepal small rural infrastructures are:

- Road/foot trial/mule trial
- Small bridge/culvert
- Drinking water/rural electricity
- Irrigation pond/ irrigation cannel
- Plantation of cash crops
- Buildings(school building, health post building).etc

Jumla is located in the north west of Nepal and is considered the administrative and commercial hub of the karnali zone. The district headquarter is located in Chandanaath municipality. A significant portion of its territory is grassland and highland meadow often used Himalayan goat's sheep's and yaks and abundant in medicinal herbs with great potential for sustainable economic development. Jumal is one of the nine district that the government if Nepal has categorized as backward area due to their remoteness. Geographic isolation and poverty are the main factors that contribute to the underdeveloped of jumla. Linked with tarmac airport and karnali highway connects jumla which makes an important trading centre for entire region. The area of the district is 2531km and there are 30 village development committees (VDCs) where the total population is108, 921(female-54,023 male-54,898) in 2011. There are 14 suspension bridges and 293 wooden bridges in the district. Every VDC is connected to telecommunication services by Nepal telecom, Hello Nepal and Ncell. Around 526kw of electricity is produced by micro hydro power plants in jumla(DDC Jumla, 2012).

Among the 30 VDCs of Jumla district Kudari VDC is taken as a study area. It is surrounded by Tatopani and some parts of Tamti VDC in its east, Raralihi and Kalikakhetu VDC in its west, Badki VDC in north and Malikathanta VDC in its south. Geographically, the latitude of Kudari VDC is 29° 16′ 40″ north and longitude is 81° 02′ 30″ east. The altitude Kudari ranges from 2300 meters to 3600 level. The total area of the VDC covers 2813 hectares. The climatologically data shows that the temperature of this VDC remains minimum at minus 50 C and reaches maximum at 300 C. According meters from sea to the baseline survey conducted under Local Government and Community Development Programme (LGCDP) program, Kudari VDC comprises of 1046 households with the total population of 6203. The distance from district headquarters to Kudari is 24 miles (VDC Kudari, 2013/2014).

1.2 Statement of Problem

Small rural infrastructure is indispensible in rural areas that help to make livelihood easier of rural people. Lack of easy access on every social physical and economic sector of rural people is leading Nepalese rural livelihood towards vulnerable condition. To minimize such a condition development of small rural infrastructure is necessary through it rural people can be linked with other district VDC, subsistence farming pattern can turn into commercialized farming because establishment of new markets will be possible, different means of communication can be developed to diffuse the information that help people in empowerment and find the options for livelihood such as business, employment etc. Beside this small rural infrastructure can help to make easy to livelihood strategy of rural people such as in animal husbandry in forest utility. Thus it's one of the most important indicators of socio-economic development and plays significant role to improve the living standard of rural people.

Kudari is the one of the poor VDC of Nepal although 51% of population is involved in agriculture but there is still food deficit. Households with food sufficiency for three months are 51.24 percent; households with food sufficiency for three months to six months are 39.48 percent; and households with six to nine months of food sufficiency are 8.60 percent. Only 1.52 percent households have food sufficiency for 9-12 months. Livelihoods of 51.24 percent households depend on labour work and 48.74 percent households depend on foreign and seasonal employment. The average production of this VDC is 0.47 ton per hectare which is lower than the national average 2.8 Metric Ton (MT) per hectare (VDC Kudari, 2013/2014). This shows the situation of study VDC even though since last eight years I/NGOs are working in different small rural infrastructure development with close coordination with government agencies DDC and VDC. So this study attempt to find out:

- What are the different opportunities created by infrastructure?
- What are the changes bought through the developed infrastructure?
- What are the opportunities created by small rural infrastructure to deprived groups?

1.3 Objective of the Study

The general objective of the study is to analyze the impact of small rural infrastructure in livelihood of kudari VDC of Jumla district and the specific objective of this study are as follow:

- To assess the impact of small rural infrastructure in livelihood of Kudari VDC.
- To analyze the level of benefits taken by deprived and vulnerable groups of people from this program.
- To analyze the levels of opportunities from small rural infrastructure to deprived groups.

1.4 Significance of the Study

Several attempts have been made for local development and poverty reduction for better livelihood of people. GON proposed a few programs in the past. These programs lacked success. International donor agencies support various programs with good coordination with local government agencies that scale up poverty alleviation effort and bring positive change in livelihood of poor people. The development experts and planners prepare and launch programs in the hope of achieving sustainability. Similarly, the evaluation and impact study of any development practices is highly required, as the effectiveness of the program is highlighted and extended in one hand and weakness of the program as the program hindrance can be minimized which then can guide for the future planners on the other hand. Therefore, the researcher thought it would be better to select small rural infrastructure as the focus of research and access its role in the rural livelihood of Nepal.

So, researcher select this VDC for the purpose of study because research because this study is feasible to conduct and easy to do in the context of limited time and resources. This study attempts to find out the impact of rural infrastructure in Kudari VDC of Jumla district after the implementation of infrastructure development programs implemented by different organizations and GON. This research is based on field survey. The study will be important for assisting students of the corresponding field to conduct related study and research. It is expected that this study will generate information useful for policy makers, planners, administrators and implementers as well.

1.5 Limitation of the Study

The scope of the study is to state, stimulate and explore the prospects, problems implications and impact of small rural infrastructure in the rural sector. As everything has its own pros and cons, the limitation that our study consists of:

1. The study is mainly confined to 3 wards of kudari VDC of jumla district of Nepal. Thus, generalization of the conclusion derived from the study in national/international level may not be relevant to others.
2. The study is very specific case study. It only deals to impact on people’s livelihood of kudari VDC of Jumla.
3. The study is limited in terms of deeper analysis as only a few variables selected from the numerous factor affecting the livelihood in the study area.
4. Our research being descriptive, we more conveniently use observation, Questionnaire and interview. The information provided by different households may have limited accuracy that is observed during survey activities.

1.6 Organization of the Study

The study has been divided into six chapters. The first chapter presents the introduction, statement of the problem, objectives, significance and limitation. The second chapter is related to the review of related literature. The third chapter is presents about the methodology adopted while collecting data. Likewise, forth chapter's deals with setting of the study area, fifth chapter is about presentation and analysis of data collected from primary and secondary source from study area. Lastly the sixth chapter is conclusion part of the study. It contains the summary of findings, conclusion and recommendations.

CHAPTER- TWO

LITERATURE REVIEW

A study on impact of small rural infrastructure on livelihood is tough and challenging job in a sense that it requires a wide range of literature during the work. Literature review gives many information and knowledge about the concerned study field which will be very fruitful guidance to the new researcher to make the study systematic, scientific, objective oriented so it is the backbone of the study.

2.1 Small Rural Infrastructure

Situla, (2006) has mention in his report "Infrastructure Development in Nepal" Infrastructure development in Nepal started during 1950, and 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 infrastructure to accelerate its pace of developments. For this transformation of country in Nepal road transport has predominant role because it is the only means for public transportation except the limited air services to some part of the country which is not affordable to common people therefore road infrastructure serves as a backbone of an overall socio economic development of Nepal. Negligible length of railway. Which is a narrow gauge in poor condition are only railway facilities in Nepal. Since overall development of Nepal is pivoted around infrastructure development focused at road transport and aimed at poverty reduction, government of Nepal has its priority in this sub-sector.

NPC, (2013) on its thirteen plans has mention that the physical infrastructure sector for the TYP accorded high priority to the road sector because that sector makes a considerable contribution to socio economic development, social integration, service delivery and governance. By the end of the second year, 25133km of strategic road have been constructed; including roads to 73 targeted 75 district headquarters. This length exceeds the target, as does the proportion of people who have access to telephone services. The upgrading reconstruction and restoration of roads in contrast saw a little progress as maintenance was not prioritized. The major challenges of in the road sector are to overcome the geographical obstacles to

providing road access to all district headquarters and remote areas to operate reliable and safe transport throughout the years to attract private investors to coordinate among various agencies involved in road construction and to evaluate the risks of damage due to natural calamities and implement mitigate measures. The expected outcome of infrastructure development as a whole could not be met for several reasons including the lack of a completed budget discrepancies between the annual budget and the periodic plan the absence of elected representatives in local government bodies the absent of project progress in the performance appraisals of employs agency. As the majority of rural settlements are scattered it is difficult to provide them with access to the national grid. Thus, alternative energy service must be developed and promoted. Nepal registered micro-hydro power development under the carbon arrangement of clean development mechanism and now receives income under this provision.

Bista, (2000) in his book " Rural Development in Nepal" mentioned that an alternative that in the light of experienced gained and in recognition of the social-political consequences of growing numbers of rural poor, planners in Asian developing countries like Nepal need reconsideration their rural development and strategies and polices. He suggests future strategies must entail linkage at the macroeconomic level between three elements. These are I) the lunching of economic activities to improve productivity and generate employment and incomes together with the development of necessary infrastructure. II) the provision of social facilities and services, such as in education and health in a long term perspective and III) the establishment of institutional infrastructure to permit the participation of local communities in the development efforts and for the effective management and implementation of progress. He also writes that with the stimulation of agricultural activities, rural roads have become critical to marketing. In fact farmers mentioned road as the major priority for the future action. The present state of transport infrastructure should therefore be improved to stimulate the growth of the scattered mountain niches connection then with main road. Support for such rural roads need to include environment friendly measures.

Bhattarai, (2015) has mentioned on her thesis "Socio Economic Impact of Rural Community Infrastructure Work" that economic growth will not reduce poverty, improve equality and produce jobs unless it is inclusive. Inclusive growth is also essential for the achievement of the Millennium Development Goals (MDGs). The globalization process, when properly managed, becomes an important ingredient for inclusive growth. In this context, UNDP

works to make real improvements in people's lives, opening up their choices and opportunities. In this context, poverty reduction is the overarching goal. UNDP promotes inclusive and sustainable human development and works to reduce poverty in all its dimensions. We focus our efforts on making growth and trade benefit everyone in developing countries. In Sudan's River Nile State, UNDP is helping villagers to increase crop yields and manage climate change impacts through new agricultural practices. 15.3 million People had greater food security in 2011-2012. Following the demand from countries, UNDP, in collaboration with the UN System organizations, has been supporting the development of MDG accelerated Action Plans in more than 50 countries covering the 2010 – 2013 period. These include countries where (MDG Acceleration Framework) MAF action plans are currently under development, as well as those where completed action plans are under implementation.

RCIW, (2008) on its report "A Decade of RCIW (1996-2007)" in mention that it evolved from providing food for work for short-term food availability to a more integrated approach that promoted both short and long term food security interventions core projects productive micro projects and complementary activities such as rural finance literacy and construction of household of community facilities .The road network within the program district was extended by approximately 700 km of drivable rural roads the rice of cash income alleviated temporary food shortage of disadvantaged people, enabling them to develop assets-roads ,fruit trees, irrigation structure, livestock and skills for an opportunity to invest in their future. Through the 700 km of roads constructed, an estimated 360000 people have gained access to vehicular transportation on the roads within a 2.5hrs walk of their homes allowing for improved access to health education, and other basic services. The major economic benefit of roads includes a reduction in cost of commodities and transport and newly establishment small market centers along their corridors.

SERDeN, (2013) has mention that Poverty reduction and economic prosperity is the ultimate goal of the nation. For this achievement it is necessary for all people to get the basic services development of infrastructure like rural road network, motor able bridges, water supply and sanitation schemes, irrigation a significant role in achieving the goal. The proper development of infrastructure in rural areas improves rural economy and quality of life. It promotes better productivity increased agricultural income, education and market centers, etc. Presently construction of rural infrastructure has under gone vigorously analyzing the present

scenario it can be felt that focus lays only on increasing the quality of such rural infrastructures. Good quality infrastructure remains a major challenge for sustainable development. It has to be understood that without proper attention on quality aspect the infrastructure may fail to contribute in awful development process rather end up with wasteful spending. It is the duty of all development activities to ensure quality of works and make it meaningful.

Coelno, (2000) has said road construction has for decades remained a central pillar of national development spending in Bangladesh, coming to represent a stereo type of massive modernizing development efforts funded through foreign aid and implemented via public works programs. However based on recent re-examination of relevance of physical infrastructure development to poverty alleviation, rural employment and household livelihood security, road works have been re-prioritized in altered formats as a critical part of poverty alleviation efforts. The Bangladesh planning commission in 1984, after reviewing earlier development projects identified three priorities aimed at alleviating the rural poverty by developing the physical infrastructure such as including roads, storage facilities and markets, expansion of irrigated agriculture, and production and employment programs for the rural poor. The emphasis on physical infrastructure as part of the three pronged strategy arose out of analysis of the characteristics of the rural economy in Bangladesh. High population density .high productivity of land, intensive, small scale cultivation, vigorous trading including the routine seasonal sale by household of even subsistence level production, large scale sale of labour, seasonal employment seeking and active non-farm sector-in words a highly active rural cash economy in which mobility and trading are of crucial importance. Rural roads in particular were identified as key to easily of constraints on agricultural production and exchange in the country. Despite the growing demand for better transport conditions in rural areas. However the issues of road construction in particular has been at the center of considerable debate in Bangladesh since the late 1980s.Rkoad projects have had a long and checkered history in the country's foreign assisted development since its independence in 1971.From 4000 km of primary and secondary highway in 1971 the network has growth to 5200 km of national and regional highway 10000km of sub regional roads 8400km of rural feeders roads and 77530km of rural road earthen roads. According to a 1996 World Bank study Bangladesh has the highest of roads to land area in developing countries of Asia.

Poverty alleviation requires improved mobility so that both women and men can access their daily needs, services, markets and income. Besides, lack of adequate, accessible and

affordable public transport creates a real barrier to older women and men in the rural areas to access basic social services. Infrastructure can deliver major benefit in the form of economic growth, poverty alleviation and environmental sustainability – but only when it provides services that respond to effective demand and does so efficiently. In developing nations, women and girls suffer most from the lack of transport infrastructure in rural areas, and walking remains a predominant mode among rural and poor urban populations, with women typically accounting for a disproportionate share. Women are almost entirely responsible for all domestic travel, which is by far the most energy- and time-consuming category in rural areas. Often women spend up to 65 per cent of household time on transport. The poor condition of the feeder roads especially affects rural women in an environment where tradition generally disadvantages women in many respects. Road infrastructure plays a crucial role in the lives of rural people. It increases transport services and travel is faster and more convenient in the sense that women and girls can travel safely further from home. Thus, the quality of rural health, education and other services become more accessible to rural women. Employment opportunities are generated for local labor including women, especially in respect of rural roads with labor-intensive construction, and on occasion national highways provide much-needed cash income for women and the poor. All the levels of education are important in every human society, and they are likely to be fully exploited if there is a reliable transport infrastructure (Tanga, Matobo& Pabie 2014).

Commission of Africa, (2013) has argue that in any nation, growth and development whether in urban or rural setting are consequent on the availability of infrastructure that provides the essential utilities and services necessary for improved standard of living. There is need for infrastructure development in urban and rural areas especially with the later being grossly neglected until more recently as exemplified by literature in any parts of rural Nigeria infrastructural facilities and services which form the central catalyst that induces population agglomeration and growth the basis footing on which development activities stand as well as the principal ingredient for the development process are poorly developed. The inadequate provision of such services as electricity supply piper-borne, water supply health care services and more readily available modes of transport and communication in rural areas will militate against prospects for better living standard and prospects for employment and other forms of economic activities. The great importance the issues of rural infrastructure have assumed in recent times is indicative of failure of past efforts an awareness of their importance is a key to rural development. Infrastructure is one of the pillars of economic transformation.

Sustainable economic growth often occurs in an environment where there is a meaningful infrastructure and there is a meaningful infrastructure and there is evidence that it reduces inequality in the society. It is also clear that development of rural infrastructure (energy, transport, water supply, storage facilities etc) generally contributes significantly to the level and quality of rural development than those that have failed to do so. Better rural infrastructure allows people to participate in and share the benefits of wider economic growth. Indeed infrastructure contributes to inclusive rural development in many ways and overall impact of high quality rural infrastructure provides rural people with access to markets and to basic services that they need. It also influences rural economic growth and employment opportunities and there by incomes and social development. For example good feeders roads can allow the supply of perishable goods to higher value urban market and the income generated can be invested in health and education and indeed into other agriculture and non agriculture productive activities improve the over well being of rural men and women.

UNDP, (2011) In Nepal there are broadly two main roads construction rehabilitation operation and maintenance: Labour based (LB) and Equipment based (EB).These technologies have their own characteristics in terms of time taken, cost incurred, benefits/losses delivered, employment, poverty impacts, sustainability, etc. The extreme of LB technology at one end of the scale is the 'green road' where all operation are done by organized human labour groups with the use of appropriate small tools of mostly indigenous origin. The extreme of EB technologies, at the other end of the scale is non-engineered, roads built solely with heavy equipments in between there is a continuum of combinations of LB and EB methods. These combinations come in two forms (I) separate technologies on different sections of the same roads, and (ii) the mixing or blending of technologies on a single- section of the road. This latter is less common, although improvement using LB technology such as stone pitching can be seen (e.g. on the mude –melung road dolakha) particularly when EB roads precede LB roads. This is because the performance of the LB road could be jeopardized by the preceding EB road.

Estache & Gorsos, (2012) the infrastructure matters to growth is now relatively well recognized and widely understood among practicenors and policy makers. There is indeed a plethora of anecdotal and more technical evidence and better quality and quantity and quality of infrastructure can directly raise the productivity of human and physical capital and hence growth (e.g. by providing access, roads can (i) improve education and markets for farmers

outputs and other by cutting costs (ii) facilitate private investment (iii) improve jobs and income level for many. In general infrastructure is defined as electricity, gas, telecoms, transport and water supply, sanitation and sewerage. However, because data on physical stocks of these sectors, or their valuation, tends to be scarce, authors have often relied on stocks of public capital seems to be attractive because it is a broader concept that is itself quite unclear. For instance it can include all public building, including often hospitals, schools or public housing and office stocks or police and fire stations. Thus the extant of it relevance to assess the impact of infrastructure on growth is at best unclear. It is in fact worsening since, pointed out by stub (2011), the relative importance of the private sector in infrastructure has increased a lot more than in other activities.

Reserved Bank, (2008) has mention that Infrastructure development is a vital component in encouraging a country's economic growth. Developing infrastructure enhance a country productivity. Consequently making firms more competitive and boosting a region's economy. Not only does infrastructure itself enhance the efficiency of production, transportation, and communication, but it also helps to provide economic incentives to public and private sector participants. The accessibility and quality of infrastructure in a region help to shape domestics firms' investment decision and determines the region attractiveness to foreign investors. A bumpy road towards prosperity this relationship between infrastructure development and economic growth has not gone unnoticed by the world's two most popular countries China and India, Which have a combined population of almost 2.5 billion. The experience of these two rapidly growing nations illustrates how different the paths to growth can be.

Mali, (1992) has mention in his report "Rural Infrastructure, the Settlement System and Development of Regional Economy in Southern India" that although researcher and policy makers are interest in rural infrastructure and its impact on agricultural and regional development in developing countries is growing; infrastructure is not easy to define. Generally, when the research community refers to infrastructure they mean roads telecommunications, electrification, and irrigation that is hard infrastructure. But focusing only on hard infrastructure provides only a partial picture other elements of infrastructure are equally important, notably institutional and soft infrastructure. Similarly soft infrastructure soft infrastructure are various services such as transport (bus and truck), finance (credit and banking) input distribution (of seeds, fertilizers, pesticides, agricultural machinery and animal

husbandry inputs) and marketing of agricultural and other rural produce is also necessary for the holistic development of rural area.

Rural infrastructure is critical to both economic and social development. Its absence thwarts growth and typically the poor are hurt most. The World Bank sector strategy, rural development from vision to action makes the economic cost forcefully when there are adequate communications networks, roads, storage facilities and electricity, farmers can obtain the information they need to grow the most profitable crops, store them, move them to market and receive the best prices for them today up to 15% production is lost between the farm gate and the consumer because of poor roads and storage facilities reducing the incomes to farmers and raising cost to urban consumers. As cities grow the need for infrastructure becomes all the more important. The links are either direct or indirect lower production costs leads to higher agricultural output and higher incomes for rural population. But better infrastructure also leads to change in attitudes that may have even more important long term impact on rural development. The most profound effects of infrastructural development could be on the attitude and values of rural households even though such changes are the least visible to casual observers. Development of transport and communication infrastructure enhances the mobility of people and information through reduction in cost and time. The economic and social importance of rural infrastructure has not been matched by the attention points out that in most countries. Rural infrastructure has received very little attention forming a serious impediment to rural development while existing statistics on the availability of rural infrastructure are poor they indicate that some 40% of the rural population of developing countries lacks access to water and 60% has no access to sanitation. In Africa no more than 8% of rural population has electricity connection. Lack of access is not only a major hardship for the population at large but disproportionately affects the poor women and children in particular, the situation described below refers to the transport sector in Africa but it reflects common occurrence elsewhere in the world and outside the world (Pouliquen, 1999).

World Bank, (1994) it has stated that developing countries invest $200 billion a year in new infrastructure 4% of their national output and a fifth of their total investment. The result has been a dramatic increase in infrastructure services for transport, power, water, sanitation, telecommunication, and irrigation poring the past fifteen year, the share of household with access to clean water has increased by half, and power production and telephone line per capita had doubled such increases do much to raise productivity and improve living

standards. In rural area especially, women and children often spend long hours fetching water. Already in adequate transport networks are deteriorating rapidly in many countries. Electric power has yet to reach 2 billion people and in many countries unreliable power constrains outstrip existing cap. The demands for telecommunication to modernize production and enhance international competitiveness for outstrip existing international competitiveness for outstrip existing capacity on top of all this population growth and urbanization. The demand for infrastructure coping with infrastructures future challenge involves much more than a simple numbers game of drawing up inventories o infrastructure stocks and plotting needed investment on the basis of past patterns. It involves tackling inefficiency and waste both in investment and in delivering services and responding more effectively to user demand on average 40% of power generating capacity in developing countries is unavailable for production twice the rate in the best performing power sector in low-middle and high income countries. Half the labour in African and Latin American railways is estimated to be redundant and in Africa and elsewhere costly investment in road construction have been wasted for lack of maintenance.

WFP, (2011) Infrastructure refers to the fundamental facilities and systems serving a country, city or area including services and facilities necessary for its country to function. It typically characterizes technical structures, such as road, bridge, tunnels, water supply, and telecommunication. So far it can be defined as the physical components of interrelated system providing commodities and services essential to enable sustain or enhance societal living condition (Small Rural infrastructure are simpler structures that help people to meet the basic need of communities these are built typically to lower specifications using local materials and work man ship. In this way these infrastructure are affordable to meet simpler requirements of the communities and can be maintained locally with involving expensive external skills and materials.

Wanmalai & Islam's, (1995) has argued that investment in infrastructure and the associated provision of services are integral to the process of development. Hard infrastructural investment in the agricultural sector in particular has played a key role in improving agricultural production and has facilitated the growth of soft infrastructure in developing countries. Although interest in rural infrastructure and its impact on agriculture and regional development in development in development countries is growing, infrastructure is not easy to define. Generally when the research community refers to infrastructure it means hard infrastructure such as road telecommunications, electrification and irrigation. But focusing

only on hard infrastructure provides a partial picture other types of infrastructure notably institutional and soft infrastructure is equally important. The absence of this institutional infrastructure can lead to unsound agricultural development planning. For example local data on climate, physiographic soils, water, vegetation and population need to be collected stored and analyzed by government agencies before planning agricultural development activities. Similarly, soft infrastructure includes various services such as those related to transportation (bus, truck), finance (credit and banking) input distributions (of seeds fertilizers pesticides and agricultural mechanism) animal husbandry and marketing (of agriculture product), which are also necessary for development.

PAF, (2011) Infrastructure which contributes to improve basic health conditions especially of women children and vulnerable groups such as drinking water sanitation facilities, alternative source of energy like micro hydro, improved stoves etc. Infrastructure that helps to increase agriculture production cropping pattern and intensity such as community based irrigation, infrastructure that ensure access to market center for local products such as community building etc. Infrastructure that enhances human capital such as primary school health post etc, infrastructure with innovation ideas and technology are small rural infrastructure.

2.2 Livelihood

Benneth, (2010) has mentioned that There were a number of early cross-disciplinary research efforts focusing on household studies village's studies and farming system that later informed and influenced development studies and livelihoods thinking however, it was not until the 1990's that the term 'sustainable livelihood' entered the development discourse. Increased attention to poverty reduction, people centered approaches ad sustainability in the political arena and development theory and practice resulted in the widespread adoption and adaptation of livelihood definitions, models, and frameworks during the next two decades. Several documents and events were particularly relevant in shaping the political milieu into which the livelihoods approach emerged. First people –centered approaches to development were emerging in response to the perceived short coming of top down, bureaucratic, market oriented approaches to development thinking of the 1950's-1970. Secondly the Brundtland Report, titled our common future emerged in 1987s from world commission on environment and development of the United Nations. This document signified the entrance of the term sustainability into development discourse and policy discussion. Thirdly, poverty reduction became the rationale and primary focus of much international development work in the 1990s

and 2000s. The explosion of livelihood research and literature is most often traced to working paper that emerged from the institute of development studies by Robert Chambers and Gordan Conway in 1992. Which sought to theoretically locate sustainable livelihoods within the actor oriented approaches to development, the frame work of environmental and social sustainability and the rhetoric of poverty reduction?

Robert & Conway, (1991) Capabilities, equity and sustainability combine in the concept of sustainable livelihoods. A livelihood in its simplest sense is a means of gaining a living. Capabilities are both an end and means of livelihood. A livelihood provides the support for the enhancement and exercise of capabilities and capabilities enabled a livelihood to gain. Equity most includes adequate and decent livelihoods for all and equity in assets and access are pre condition for gaining adequate and decent livelihoods. Sustainable stewardship of resources is a value (or end) in itself and it provides conditions (a means) for livelihood to be sustained for future generation. A concept of sustainable of livelihoods was put forward in report of n advisory panel in world commission on environment and development. In calling for a new analysis it proposed sustainable livelihood, security as an integrating concept and made if central to its report. The definition was as follows; Livelihood is defined as an adequate stocks and flow of food and cash to meet basic needs. Security refers to secure ownership of or access to resources and assets to offset risk, ease shocks and meets contingencies. Sustainable refers to the maintenance or enhancement of resources productivity on a long term basis. The simple definition of livelihood as a means of securing a living summaries a reality which comes in focus as being complex as its parts are found and named and its structure unraveled. The definition of a livelihood can be at different hierarchical levels. The most commonly used descriptively is the household usually meaning the human group which shares the same hearth for cooking. In adopting this level in which the well being and access of some household members and especially women and children may be inferior to that of others, especially women and children may be inferior to that of others, especially men and also the broader levels of the extended family the social group and the community. In our provisional anatomy of a household livelihood, we postulate four categories of parts. I) People-their livelihood capabilities, II) Activities- What they do, III) Assets- tangible (resources and stores) and intangible (claims and access) which provide material and social means, IV) Gains or output- a living what they gain from what they do. The care of a livelihood can be expressed as living and the main components and relationships.

Geregory, (2008) has mention that Survival is the basic instinct of all living organism. In case of scarcity of resources there is a struggle of existence in which survival becomes the privilege of fittest. The scarcity itself could be either natural or on outcome of artificial creation or conditions. The term 'livelihood' implies the capability and capacity to survive. Since human being live in society and are capable of developing suitable adaptive mechanism for survival, ensuring a secured livelihood for all living humans becomes a social responsibility moreover, survival is only one of the necessities of life but basic to all other higher necessities which go on changing and take on higher stakes with change of times. Nevertheless exploitation and the struggle for existence are as much part of human history as it is part of nature. Who are the most deprived lot and who sometimes had to struggle even for the basic livelihood not to talk of higher necessities? The severity of the situation could gauge by exploring the extent of access to and control over resources. So, it is also in a way a struggle for empowerment manifesting the ability or the capacity, not only to ensure a basic and sustainable livelihood but also to gain the higher necessities. The identity of an individual as also of a society can be said to emerge from the level of one's ability or the capacity to acquire the necessities of life basic or the capacity to acquire the necessities of life basic or otherwise reflecting the degree of empowerment.

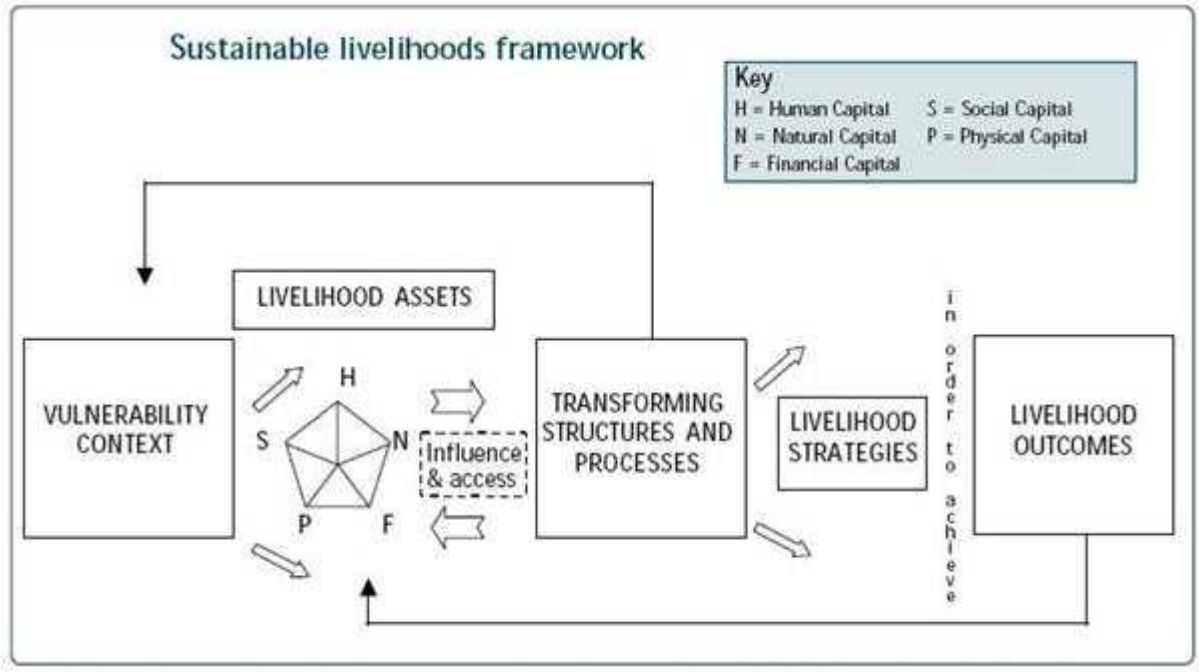
Warren, (2002) Following some insights that Russian agronomist A.V chayanov developed in 1920s and 1930s.anthropologist tend to agree that such diver's production patterns were instrumental to the attainment of basic economic goals of pre-industrial of rural household. Maintenance of consumption standards, creation of condition for future reproduction and avoidance of drudgery though pockets of people practicing the pre- industrial mode of production may continue to exist in remote areas of the world, this livelihood strategy has entered during the last fifty years into major straits well known driving factors of this crisis included; population growth and the subsequent progressive shrinking of land holding size and environmental degradation, the incorporation of rural areas into national markets and the increased vertical integration of farmers household in national economy, the subsequent decrease of the relative importance of small farmers as producers of agricultural commodities due to the ex pension of capital intensive agriculture and globalization of the world food market, the growing (though somehow erratic) demand for both agriculture and industrial wage labour, structural readjustment policies which decrease the availability of public support to small scale agriculture and often make access to new technology and information less affordable to small farmers, the emergence among rural people of new social

need(education, modern health care technological commodities) and the increasing importance of cash transactions in rural household economics that all the above imply. Activities no longer economically and socially viable have been replaced with new ones better suiting the context of a more mature market economy more over industrial organizational patterns(such as, contract farming) have been introduced into the rural household economy, giving often birth to hybrid livelihood strategies.

Rural households with no access to resources have been following multiple survival strategies throughout the history of Nepali nation-state.the strategies adopted by household in the 18th and 19th centuries mainly involved permanent and temporary migration to other areas of the country and beyond. Another strategy for acquiring income has been serving in the India and British armies and non-military work mainly in India. Employment opportunities in the armies arose since 1816when the war with British India ended. Although Gurungs from central Nepal have benefited the most from the army services, other authors (Macfarlane 1976; Schroll) have reported that the poorer households have mainly benefited from the employment. After the eradication of malaria in the plains if Nepal in the 1950s and 1960s the tarai, became the main destination for many hill migrants. While the poorer families migration to the terai with a view to acquiring land dried up by early 1980s, army pension and remittances from labor abroad are still important sources of income for some rural households. In recent year rural household has felt grater hardship in earning their livelihood from their own production due to rapid population growth they are shifting their emphasis from subsistence farming to other sources of income to maintain their livelihoods. In the past the proportion of household depending on multiple sources of income for survival was comparatively small as their farming could fulfill all requirements of basic food stuff like food grain, nowadays the majority of rural household depend on many sources of income for survival. A livelihood is a sustainable if it can bear the weight of present activities for a long period without compromising the future prospects. (Adhikari, 2008)

DFID, (2000) Sustainable Livelihood frame work seeks to take a more comprehensive and integrated approach to poverty than traditional interpretations, which largely consider poverty in relation to a narrow set of indicators (such as income and productivity). Building upon prior by organizations such as institution for development studies at the university of Sussex and Oxfam, the Department of International Development (DFID). Sustainable Livelihood framework was developed in order to organize and improve organizations efforts to eliminate

poverty. The framework aims to present these primary factors their significance and the nature of their interactions which is as follow:



This Livelihood framework consists of five major components that are related through sequential relationships and feedback. These include;

A. Vulnerability Context

Overview. The vulnerability context describes the external uncontrollable factors that influence people's assets and livelihood opportunities, broadly these factors are classified as

- Shocks(e.g. environmental, conflict related)
- Trends(e.g. resources, technology)
- Seasonality(e.g. price fluctuations, employment opportunities)

How to influence. In the short to medium term there is little that people can do to affect the vulnerability context itself. However humanitarian and development agencies can play a critical role in promoting resilience to these factors by increasing access to insurance, improving, institutional response capacity and implementing other resilience promotion programs.

B. Livelihood Assets

Overview. The DFID framework outlines assets in terms of five categories necessary for the pursuit of positive livelihood outcomes.

- Human Capital(i.e. the amount and quality of knowledge and labour available in a household)
- Financial capital(i.e. saving and regular inflows of money)
- Natural capital(i.e. the quality and quantity of natural resources ranging from fisheries to air quality)
- Physical capital(i.e. the infrastructure, tools and equipment used for increasing productivity)
- Social capital (i.e. social resources, including networks for cooperation mutual trust, and support.)

How to influence. This element of the framework utilizes a pentagon to describe livelihood assets with each point assigned to a particular type of assets so that the shape of the pentagon to describe livelihood assets with each point assigned to a particular type of assets so that the shape of the pentagon changes as stores of certain types increase. When addressing this component of the framework, humanitarian and development agencies should pay attention to two considerations in particular, the sequence in which certain assets contribution most effectively to attainment of others and instance when certain types of assets can be substituted for other types (e.g. human capital for financial). As people acquire more assets, they will become more empowered to influence the next component of the framework, the structure and process that affect them.

C. Transforming Structures and Processes

Overview. Here ‘structure’ refers to the organizations that create and enforce legislation, provide the necessary requirements for acquiring and capitalizing upon assets(e.g. private supplies of materials for building shelters) manage natural resources and provided other services crucial for gaining access to assets, exchanging them and benefiting from their use mean while “processes” determine the interactions between the structures and individuals. Example of processes include policies legislation, power relation, norms, market stability and general rule of law.

How to influence. Structures must be accompanied by appropriate policies if they are to have any impact on the poor, while policies must be implemented by competent structure if they are to be carried out in the intended manner. Still humanitarian and development organizations can take steps to improve structures and process individually organizations should focus on building institutions 'capacity to represent interest of poor provide training so as to reduce the market gap in goods ans services and bring together different organizations and interest through joint forums. Likewise, they should support participatory models of policy formulation, increase the accountability and transparency of institution, support the expansion of social safety policies and direct other efforts toward elevating the voice of the poor in policies legislation and institution.

D. Livelihood Approach

Overview. Livelihood strategies concern the individual's available and implemented options for provision livelihood goals. The grater the diversity of livelihood strategies the higher the household resilience to the shocks, trends, and seasonality conditions within vulnerability context.

How to influence. In accordance with a sustainable livelihood approach, humanitarian and development agencies should look to promote those underlying conditions that provide the greatest diversity of choices and flexibility in the pursuit of maintaining a livelihood. In doing so, agencies should focus on expanding access to a variety of capital assets and supporting the improvement of the structures and process that shape livelihoods. These efforts should be complemented by attention to the social safety nets provided to those who are unable to achieve livelihood objectives through the market system.

E. Livelihood Outcomes

Overview. Livelihood outcomes refer to the outputs of livelihood strategies. Achievements may include higher income grater well being (e.g. self-esteem, physical security, political empowerment), reduced vulnerability grater food security or improved environmental sustainability.

How to influence. The balance of livelihood goals indicates motivations for behavior, livelihood priorities, and in turn the types of a activities that humanitarian and development agencies is to support the achievement of positive livelihood outputs, conflicting outcomes,

the difficulty of translating outputs into indicators of success and lack of objectivity in the monitoring process make and output-based set of indicators complicated.

Nepal (2014), The livelihood approach is concerned first and foremost with people. It seeks to gain an accurate and realistic understanding of people strengths (assets or capital endowments) and how they endeavor to convert these into positive livelihood outcomes. The approach is founded on a belief that people require a range of assets to achieve positive livelihood outcomes; no single category of assets on its own is sufficient to yield all the many and varied livelihood outcomes that people seek. This is particularly true for poor people whose access to any given category of assets tends to be very limited. As a result they have to seek ways of nurturing and combining what assets they do have in innovative ways to ensure survival.

CHAPTER-THREE

RESEARCH METHODOLOGY

Research methodology is the backbone of the study and essential part of the thesis paper which forms the framework for obtaining all necessary inputs of the study. In the present study the methodology includes research design, nature and sources of data, sampling procedure, data collection techniques and tools, data processing, analyzing methods and presentation.

3.1 Research Design

This study has followed exploratory and descriptive research design because this study has focused on impact of small rural infrastructure in livelihood on the kudari VDC of Jumla district. Research design refers to the procedures for the collection of data and its analysis. This study had analyzed all the information collected by field survey.

3.2 Nature and Sources of Data

This research aims to find out the impact on livelihood of small rural infrastructure in Kudari VDC of Jumla district. Thus in this study both primary and secondary sources based on quantitative as well as qualitative data have been used. The primary data were collected from, structured questionnaires related to small rural infrastructure and its impact in order to get accurate and actual information, observation, and unstructured interview. The questionnaires were distributed to a responsive of person. All the secondary data have been collected from different published and unpublished records, reports of government and non-government organizations. Mainly such as report, CBS, UNWFP, news article, Journal etc.

3.3 Universe and Sampling Procedure

From the Kudari VDC of Jumla District 3 wards 2, 4 & 5 were selected purposively, the total households of selected wards are 220. Among them, all the households were found benefited directly or indirectly. Out of 220 households, 76 households were selected by using random sampling method under the probability sampling.

3.1: Sampling Procedure

Table no: 3.1 Sampling Procedures

VDC	Ward. no	Total House Hold	Sampled Household	Sampled in percentage
	2	71	25	19
	4	86	26	18
kudari	5	63	25	19
Total		220	76	56

3.4 Data Collection Method and Tools

The data have been collected systematically by adopting different tools as structured questionnaire, unstructured interview, key informant interview, focus group discussion and observation.

3.4.1 Household Survey

Structured questionnaire was prepared to generate the realistic and accurate data from respondent were requested to fill up the questionnaire. Altogether 76 households were interviewed during the study. Questionnaire was based on about small rural infrastructure and its impact on livelihood. All together 16 questions were included in the questionnaire aiming to obtain the information. The questions were asked to beneficiaries of infrastructure program implemented in the ward and answer was filled up. The data were collected through formal and informal interviews using structured questions.

3.4.2 Key Informant Interview

The primary data were also collected from key persons structured interviews with set questioners. The interview was taken as cross checking for data obtained from HHs questionnaire. In key informant interview unstructured one-one directed conversations was held with key individuals, infrastructure development committee members, social workers, local level political leaders, village group members were key persons for interviews. Key person interview was conducted among fifteen people related to the infrastructure development in and working in the same area. Twelve questions related to infrastructure and its impact was asked. Although including eight women and seven men were interviewed as a

key informant in the study area, the information provided by those people is considered very reliable in much aspect. This information has been used for qualitative data analysis.

3.4.3 Field Observation

The researcher visited five times to observe the activities and services of local people through developed small rural infrastructure. During the period of field work, researcher observes the condition of infrastructure and noted relevant information.

3.4.4 Focus Group Discussion

In the process of data collection the focus group discussion was carried out for the collection of data. The focus group discussion was held with the active participation of beneficiaries, local people, member of organization, member of infrastructure development committee and technical person were gathered for the purpose. Related unstructured questions were asked to get information for the study.

3.5 Data Analysis

The collected data were edited, coded and tabulated in the spread sheet by using SPSS & excel program of computer. After doing this, the qualitative data were presented in paragraphs and quantitative data were presented in tables. Besides data collection, success of research study depends on the effective analysis of data and its presentation. Hence the collected data have been presented in tabulated form. Data obtained in numeric form have been presented with number and its percentage forming a table which gives the comparative picture of the reality and data which were not obtained in numeric form have been presented in descriptive way.

CHAPTER-FOUR

SETTING OF THE STUDY

In this chapter an attempt has been made to describe the geographical, socio-economic and demographic characteristics of the people covered by this study. As mentioned above, Kudari VDC of Jumla district has been selected as a case for the present study. In view of this, a brief introduction of the study area and the description of the sample characteristics have been presented.

4.1 Fact of Jumla District with Indicators

The literacy status of Jumla District is 55 percent. Where 90 percent of people depend on agriculture. The Indicators of the Jumla District is illustrated in the following table:

Table 4.1: District Profile with Indicators

Geographical Situation	28'58" North to 29'30"North Akachayansh
Geographical Structure	(1) High mountain area (2)Hilly Areas (3)Plane Land area
Height	From the sea level 7000 ft (Nangama) to 21077 ft (Patarasi Himal) and District head quarter height is 7600 ft.
Total Territory/Land	2, 53,100Hecter/2531 Square kilometer
District boarder	East in Dolpa district. West in Kalikot district, North in Mugu district and South Jajarkot district.
Climate	Cold, warm and dry
Tentative Annual rain fall	800m.m
Temperature	Highest 30'C' in Jesth and Aasada) Lowest -12'C' in Poush and Magha) Snow fall - 46.06 c.m
Main Rivers	Tila River Hima River Jawa River
Total Population	108,921 Male: 54,898 Female: 54,023

Total household	19291
Literacy rate	55% in total population
Density of Population	30.01each Square KM
Per Person income	Rs.4834.00- Human development -1998
Average Age	47 year
Major Cast	Braman, Chhitra, Thakuri, Tamang,Newar, Sarki, Kami, Damai
Language	Jharo Nepali
Occupation	Agriculture (90%Population depend on agriculture)
Crops	paddey, millet, wheat, mize, barley Potato, pulses e.t.c

Source: DDC Jumla, 2012

4.1.1 Distribution of Population by Ethnicity

Ethnically Jumla district is diverse with people from different ethnic groups residing in it. The total information about the ethnic composition of district is given in the table below.

Table 4.2: Population by Ethnicity in Percentage

Ethnicity	Percentages
Brahmins	11
Chhetries	69
Dalit	16
Janajati	2
Madeshi	2
Total	100

Source: DDC Jumla, 2012

4.1.2 Food Sufficiency of the Households by Duration

In Jumla more than 90 percent of population is dependent on agriculture but also there is lack of food due various reasons so below the table shows food sufficiency of HHs by month of this district.

Table 4.3: Food Sufficiency of Household

Food Sufficiency Months	HH in %
Less than 3 months	13.81
3 to less than 6 months	55.00
6 to less than 9 months	22.38
9 to less than 12 months	5.71
12 months or Surplus	3.10
Total	100

Source: DDC Jumla, 2012

Only small segments of the households (3.1 %) have reported they have food sufficiency for 12 or more months. More than half of the population have food sufficiency for 3 to 6 months, is followed by 6 to 9 months (22.38%) and only (5.71%) of the households have reported that food is sufficient for 9 to12 months indicating that overwhelming majority of the households have food deficiency, for which they have to support their family from other sources of income.

4.1.3 Household Income from Different Sources

Household income is a main indicators that determines the livelihood situation and livelihood strategies of the people here in table mention below shows the people dependent in different income source available in Jumla district.

Table 4.4: Household Income with Source

Source of Income	Percentage
Agricultural wages/ labor	16.29
Non- agricultural wages/salary	36.52
Sale of agricultural products	6.98
Livestock/Fisheries sale	2.71
Milk and milk product sale	0.85
Remittances	3.72
Occupational work (tailoring, black smithy, carpentry etc)	1.85

Forestry related products sale	1.38
Pension	1.99
Own enterprise	6.92
Others	20.80
Total	100.0

Source: DDC Jumla, 2012

Above table shows that non-agriculture wage and salary is found to be major contributor to total annual income, which accounted for 36.52 percent followed by others with 20.80 percent. Agricultural wages/labor comes to be third with contribution of 16.29 percent of the income. Combining the income from different heading as given in the following table the average income is found to Rs.1, 47,100.

4.1.4 Household Expenditure on Different Items by Household

Table 4.5: Household Expenditure

Items	**Percentages**
Food	28.49
Fuel	1.08
Apparel and personal items	17.57
Social and Religious activities/Donation/Charity	1.55
Insurances and taxes	1.18
Repair and maintenance of house, vehicles, equipment	1.48
Transportation	5.66
Newspaper/Communication	0.22
Disaster related Expenses	0.23
Input cost for agriculture/livestock/other enterprises	1.61
Health	15.88
Education	24.44
Cash losses	0.50
Other	0.10
Total	100.00

Source: DDC Jumla, 2012

Food constituted highest part of expenditure with 28.49 percent followed by 24.44 percent in education, and 17.57 percent on apparel and personal items. In health also, substantial 15.88 percent expenses has been reported indicating wide spread health problems together with costly health care.

4.1.5 Percentage of Households Members Migrated and its reasons

Below in the table out of the total migrants, considerably high percentage (70.83%) of them has reported for education. Family reason as a reason for migration has been reported by 16.67 per cent of the migrated population, is followed by 8.33 percent looking for work and 4.17 percent have migrated due to natural disaster.

Table 4.6: Reason of Migration of HHS Members

Reasons	HH Members (%)
Family reason	16.67
Education/Training	70.83
Natural Disaster	4.17
Looking for work	8.33
Easier Lifestyle	0.00
Other	0.00
Total	100

Source: DDC Jumla, 2012

4.2 Facts of Kudari VDC with Indicators

Below table no 4.7 gives various information about the Kudari VDC.

Table 4.7: Information of Kudari VDC

Height	2300m to 3600m from sea level
Temperature	-5'c' to 30'c'
Total land	2813h
Total population	6203, Female (3028) Male (3175)
Total household	1046

Literacy rate	73% (among this only 49% of women are literate)
Poverty	51.52% of people are below poverty line
Source of water	Tila river, Bheri khola
Crops	Paddy, millet, maize, wheat, barley e.t.c
Occupation	51.24% of total populations are depending on agriculture.
Caste	Dalits, Janajati, Brahmans, Chhetris.

Source: Kudari VDC, 2013

4.2.1 Distribution of population by ethnicity

Below in the table it is shown that of the total population in Kudari VDC, Dalits are 24.37 percent, Janjatis are 0.09 percent, Brahmans are 29.44 percent and Kshetri are 16.06 percent.

Table 4.8: Distribution of Population by Ethnicity

Ethnicity	Percentages
Brahmins	29.44
Dalit	24.37
Janajati	0.09
Chhetris	16.06
Others	30.04
Total	100

Source: Kudari VDC, 2013

4.2.2 Population by the age group

Table 4.9: Distribution of Population by Age Group

Age group	Population in %
0-3	18.69
3-15	27.24
15-60	48.34
60-above	5.51
Total	100

Source: Kudari VDC, 2013

The percentage of population up to three years of age is 18.69; from 4 years to 15 years of age is 27.24 percent, from 16 to 60 years age is 48.34 percent; and above 60 years of age population is 5.51 percent.

4.2.3 Education, Health, Drinking Water and Sanitation

In Kudari, there are 9 Early Childhood Development Centers, 5 primary schools, three lower secondary schools and one higher secondary school with 11 buildings and 53 classrooms in total. The literacy rate is 73 percent, but the literacy rate of women is just 49 percent. The enrolment rate of school going age children is 89 percent. The school dropout rate is 10 percent which has two main reasons, one is involvement of children in household work and the other is lack of income of the households. Because of the availability of integrated health services, the child mortality rate and maternal mortality rate are decreasing. All the mothers and children were immunized. It takes two hours to reach the nearest public health facility. Main problems in the health sectors that have hindered the availability of effective health service in the VDC are lack of training of health workers, insufficient medicine, and inadequate equipment supply and poor physical infrastructures. The malnutrition rate is 44 percent. Eight hundred ninety one (891) households have access to piped water supply and 95 percent of households using toilets (source: Kudari VDC, 2013).

4.2.4. Physical and Social Infrastructure

In the VDC, five kilometer agriculture road is under construction. Construction of one Trail Bridge was recently completed and one is still under construction. There is a need to construct 21 classrooms in nine schools. One health post and six community buildings in the VDC are in working condition. Two hydropower projects are under construction and 690 households are using renewable energy. Nine hundred forty eight (948) households are using mobile phones as communication medium (source: Kudari VDC, 2013).

CHAPTER- FIVE

DATA PRESENTATION AND ANALYSIS

5.1 Population of Sampled Household in the Basis of Gender and Age

Population is one of the socio-economic parameters that have integrated relation in each and every aspect of the social phenomenon. That has relation to social productivity and potential of that society. The total population of the surveyed households is given in the following table.

Table 5.1: Population Distribution of Sampled HHs

Age	Male	Male%	Female	Female%
0-5	27	10	24	9
5-16	90	33	85	34
16-60	127	47	125	49
60 Above	27	10	21	8
Total	271	100	255	100

Source: Field Survey, 2016

Table no 5.1 shows that 10% of male and 9% of female are up to 5 years old and the population % of 6 to 16 age male is 33% & female is 34% further table shows that 47% male and 49% of female are 17 to 60 years old and 10% male are above 60 as well as 8% female are above 60 years old.

5.2 Decision Making of Household

Decision making is one of the important indicators that shows empowered mass in male dominant society like Nepal which is related to livelihood of the people. Below the table shows that after the infrastructure development project who mainly makes the decision of sampled household.

Table 5.2: Gender in Decision Making of HHs

Indicator	Frequency	Percentage
Both together	46	61
Female	13	16.9
Male	17	22.1
Total	76	100

Source: Field Survey, 2016

Above in the table shows that in sampled household of study area 61% of male and female both together make their household decision 22.1% male's and similarly 16.9% of female's make their household decision.

5.3 Main Income Source of Sampled HHs

Source of income is one of the important indicators of the livelihood status of the people that it determines the household's wealth, well-being, literacy status and social stigma in society which plays a vital role in livelihood pattern of rural people. On the basis of major source of income in the study area, the households engaged in agriculture, employment, remittance, wages labour and business is shown below table no.5.3

Table 5.3: Main Income Source

Occupation	Frequency	Percentage
Farming	33	43.42
Employment	13	17.1
Remittance	7	9.21
Wages labour	10	13.15
Business	13	17.1
Total	76	100

Source: Field Survey, 2016

The above table shows main source of income of people in the study area most of the people like to say farming. Among the population (43.42%) people main source of income was farming, (17.1) were employed, same (17.1%) were engage in business for their income,(13.15%) of people income source was wages labour and (9.21%) like to say remittance is main source of their household income.

5.4 Approximate HHS Income

Income is one the key indicator of situation of livelihood of people. So here researcher simply tries to found out the annual income responded HHs.

Table 5.4: Approximate Annual Household Income

Indicators		Frequency	Percent
	Less than 50 thousand	37	49
	More than 50 thousand	39	51
	Total	76	100

Source: Field Survey, 2016

In the table it has shown that 49% of sampled household have annually less than 50 thousand income and 51% of household have annually more than 50 thousand.

5.5 Infrastructure Built in the Study Area

There are different factors that effects on livelihood of rural area among them one is small rural infrastructure. In the study area of kudari VDC different infrastructure has been built by different agencies collaborating with government agencies below table shows what sampled household answer of infrastructure built in the study area.

Table 5.5: Infrastructure Built in Study Area

Infrastructure	Total Respondent	Respondent Frequency	Percentage
Rural Road	76	33	12.9
Irrigation	76	44	17.3
Mule/Foot trial	76	58	22.7
Fruit Orchard	76	2	0.8
Drinking Water	76	55	21.6
School Constriction on Support	76	27	10.6
Toilet Construction	76	35	13.7
Land Improvement	76	1	0.4
Total			100

Source: Field Survey, 2016

Above in table no 5.5 Among the 76 respondents 22.7% has argue mule/foot trial has been built than 21.6% said drinking water 13.7% told toilet, irrigation 17.3% and 17.13% rural road has built in study area 10.6% is school construction only little bit 0.8% fruit orchard and 0.4% of land improvement has been built in community.

5.6 Supported Agencies to Build the Infrastructure.

Financially and geographically Jumal is one of the poor district of Nepal and the study is done on one of the poor VDC of this district self only the government agencies only cannot make a change in such a area so to make a change government agencies have to collaborate with different other agencies which it is shown in study area and they have try to make

change in livelihood of people below the table shows that which agencies has contributed what type of inputs in study area and try to bring positive change in peoples livelihood.

Table 5.6: Inputs Supported by Agencies

Agencies		Inputs		
	Cash%	Materials %	Labour%	Total%
Community	1	-	99	100
VDC	13	51	-	64
DDC	32	67	1	100
I/NGOs	83	17	-	100

Source: Field Survey, 2016

Above in table no 83 percent cash is supported by I/NGOs 32 percent by DDC, 13 percent by VDC and 1.3 percent by community. Further 67 percent materials are supported by DDC, 51 percent materials are supported by VDC and an only 17 percent material is supported by I/NGOs. In the case of labour 99 percent of labour is supported by community 1 percent is supported by DDC and 36 percent of respondent told that VDC didn't support anything. So, survey found supportive role from different agencies to build the different rural infrastructures in the study area.

5.7 Mainly Benefited from Developed Infrastructure.

Before implementation any development projects targeted group should be determine. In the study area also there are target groups who are benefited from the created infrastructure with help of sampled HHs responded researcher has try to find out the mainly benefited from the project.

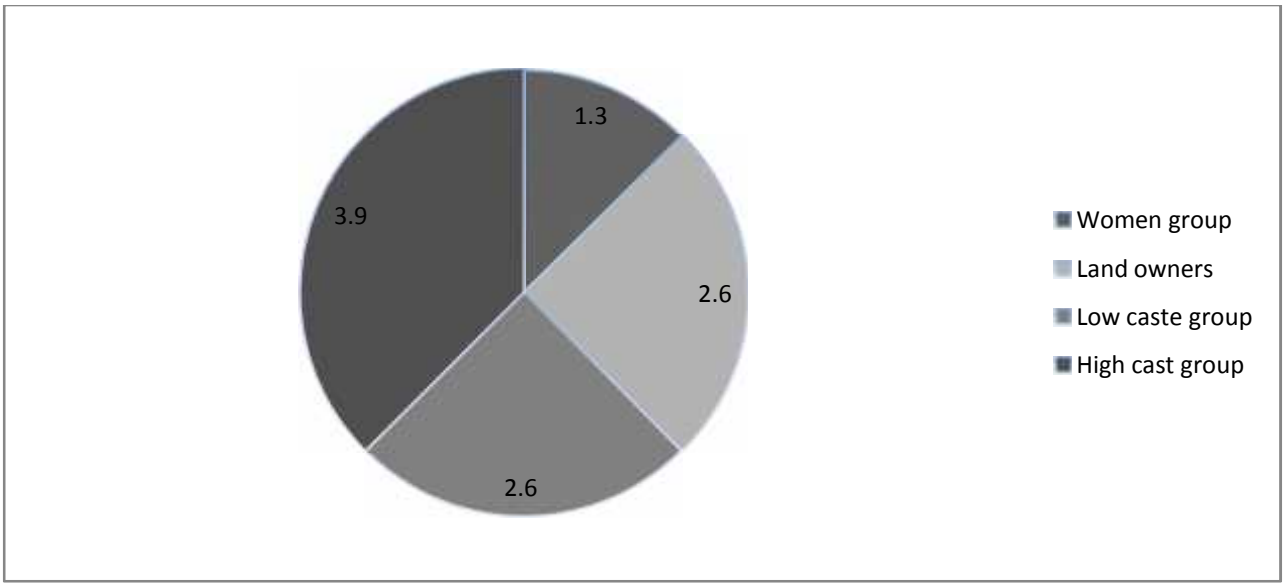
Table 5.7: Benefited from Developed Infrastructure

Indicator	Frequency	Percentage
Entire targeted people in community	26	34.22
Most of the targeted people in community	42	55.26
Few targeted people in community	8	10.52
Total	76	100

Source: Field Survey, 2016

Table no 5.7 shows that 34.22% entire targeted people are benefited and 55.26% of sampled HHs argues that most of the targeted people are benefited in community people are benefited in community only 10.52% said few people are benefited. If only few are benefited than who are they it is shown below in pie chart:

Figure1. Few Benefited People



Source: Field Survey, 2016

Pie chart shows that who are few people are benefited and it is 1.3% women group, 2.6% land owners, 2.6% low caste and 3.9% high caste group.

5.8 Impact on Seasonal Migration.

Jumal is one of the poor district of Nepal one of the major reason for this is lack of employment opportunities for the people, and it effects directly in livelihood of the people. So for sustain their livelihood people used to migrate to inside the district or outside the country India in search of employment. Below in the table it has shown that after the infrastructure development in the community how is the trend of seasonal migration.

Table 5.8: Infrastructure Impact on Seasonal Migration

Indicators		Frequency	Percent
	Increase	9	12
	Decrease	41	54
	Remain same	26	34
	Total	76	100

Source: Field Survey, 2016

Above in the table 54 percent of responded argue that seasonal migration had been decrease 34 percent argue that it has remain same and 12 percent have argue that the seasonal migration is increase.

5.9 Impact on Local Food Market

Market is one of the key indicators that show livelihood parameters of the people of rural area. If there is no any market access livelihood will be difficult so research has try to find what happen on the market of the study area after intervention of infrastructure development project.

Table 5.9: Infrastructure Impact on Local Market

Impact Indicators on Local Food market	Total Respondent	Frequency of Respondent	Percent
Insufficient food supply	76	7	4
Increased a availability if food	76	52	31
Increased a verity of food	76	41	24
Decrease a verity of food	76	2	1
Increase in number of traders	76	27	16
New markets	76	32	19
Price hiking	76	2	1
Remain same	76	7	4
Total			100

Source: Field Survey, 2016

In table no 5.9 among 76 HH 31% has argued increase in food availability than before 24% said verity of food has increase, 19% said that new markets have been developed and 16% argued that number of traders has been increase.

5.10 Changes Bought Through Infrastructure

If any development project is implemented in certain place definitely it will bring certain changes in that place eventually that change interferes in the livelihood of the people. So in this topic by using the table researcher has tried to find out the changes bought by the developed infrastructure in the study area.

Table 5.10: Changes Through Infrastructure

Changes Bought in Variables	Total Respondent	Respondent Frequency	Percent
Transportation facility	76	45	19.2
Increased in road accident	76	43	18.4
Market accessibility	76	42	17.9
More economic activity	76	63	26.9
Increased in household expenses	76	26	11.1
Deforestation	76	15	6.4
Total			100

Source: Field Survey, 2016

Above in the table no 5.10 it has shown that 26.9% of people in study are said that they have done more economic activities, 19.2% have got transportation facilities here 19.2% has argued that there is 18.4% of road accident as well increased in HHs expenses 11.1% deforestation has been 6.4% and people access in market is 17.9%.It shows that changes bought by infrastructure development is positive as well as negative too this which is directly related to livelihood of the people.

5.11 Benefits from the Developed Infrastructure

After the infrastructure development project intervention in certain area people from that area will be benefited if this situation doesn't exist there will be no any value of project. So here in study area after the infrastructure development project research tries to find out what benefits did the people get from the project with the help of certain indicators.

Table 5.11: Benefits from Infrastructure

Indicators	Total Respondent	Respondent Frequency	Percent
Increased income	76	62	25
Increased in employment opportunities	76	35	14.1
Increased in production of cash crops	76	41	16.5
Improved market access	76	29	11.7
Reduce a seasonal migration	76	27	10.9
Improved in health and sanitation	76	54	21.8
Total			100

Source: Field Survey, 2016

Among the sampled HH 25% of people income has been increased in case of health and sanitation 21.8% people said that it has improved 16.5% of production of cash crops have been increase 10.9% people says this project has reduce a seasonal migration where 14.1% people argue that employment opportunities have been increase and lastly people argue that 11.7% have been improved in market access.

CHAPTER -SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Summary

Nepalese rural livelihood is mostly depend on agriculture, forest and animal husbandry, so if suitable infrastructure is not develop we cannot make change in these factors and it will be only dream to make positive change on livelihood of rural areas. Small rural infrastructure is suitable infrastructure that helps people to meet their basic need that is developed by using the local materials, knowledge and by the local people which aims to make positive change in the livelihood of rural people. Now in the present scenario little bit the infrastructure development practices is going on, and some of them are completed in rural area with the help of different national agencies and international agencies. As a result positive change has been occurring in livelihood of rural people and new livelihood strategies has been adopting by rural people such foreign employment, business, engage in private sector etc.

This study is base in 3 wards of one of the poor VDC of Jumla district. Study title is "Impact of Small Rural Infrastructure in Livelihood" carrying the objective evaluate the impact of small rural infrastructure in livelihood and identify whether various deprived and vulnerable group of people get equal benefits or not. The study is mainly base in primary information, from 75 household, key informant interviews were carries out with stakeholders with the help of structure questioners and without any set questioners focus group discussion was carry out in the study area. Other related information was taken from the different person who is working in infrastructure development in the study area. The summary of finding is mention below;

- Total household of study area is 220 where 1300 is the total population of out of that 49.69 percent male and 50.31 percent is female.
- Infrastructure development was started in 2064 B.S in study area.
- Main source of income is farming (43.42%) of most of the sampled household
- While developing the infrastructure 9 members committee was formed of local people and compulsory there should be 30% female handling one major post and 1 member should be from marginalized community.

- 37.5 percent keys persons argue that marginalized and women group they strongly rise their voices and 31.3 percent said that to some extent they raise their voice in committee meeting and remaining they don't rise their voice because of lack of awareness 12.5 percent and minor representation12.5 percent.
- Different government agencies (DDC, VDC) and non governmental agencies (WFP, PAF, KEP) have created infrastructure in study area.
- The model of WFP have got good response by the people of study area because in this model while implementing the infrastructure development program local people were used to work and they get cash according to district labour rate and food, this modality has created the employment opportunities and seasonal migration have been decrease.
- 63 percent of sampled HHs are satisfied with the quality of infrastructure and 12 percent respondent argue that infrastructure has created very strongly same as 12 percent are not satisfied among them, 25 percent said because of limited technical skills, 19 percent said because of wrong site selection and again 19 percent of people are not satisfied because using the limited construction materials and 37 percent of people are not satisfied due to various reason like politics for developing infrastructure carelessness of authorized person.
- Herding livestock is now safer due to infrastructure and collection of firewood and fodder is easier than before.
- Created infrastructure has helps to links with other ward and VDC (malikathata) so we can say that benefits are wide reaching.
- It has given space to local community group to meet building social capital and allowing people to organize and work together. Shortly we can say that it has help in empowerment of the people.

- 73 percent of people argued that developed infrastructure is maintained by community, 4 percent and 14 percent of infrastructures are maintained by DDC/VDC and I/NGOs, 9 percent respondent said that there is no any maintenance plan.
- Infrastructure in community has improved in equally access to education, health and markets to local children and people, new markets are born, it has help people to find options in livelihood strategies but because of no maintenance plan it has limit the benefits.
- Equally short term employment and food during the construction have provided relief to local people.
- Irrigation cannels have allowed people in vegetable cultivation which was impossible before and according to people of study area slightly the productivity of land has increase.

6.2 Conclusion

Connection between Mountain Hills and Terai is most important for development of Nepal. It helps people to make their livelihood easier. For this infrastructure development should be the first priorities then only linkage between three geographical regions is possible and that can lead towards the prosperity. In the study area infrastructure development program implemented by WFP and DDC unit RCIW is very suitable because they form the committee and organize the different types of training which had help local people in the process of empowerment. They use local labour to develop infrastructure and in return labour will get cash and food according to district labour rate. By this way local people are getting short term employment and increasing food availability.

Subsistence and seasonal farming is main involvement of people in study area so livelihood has depended on it. After the implementation of small rural infrastructure program like development mule/foot trial, irrigation cannels, toilet construction, school building construction etc the opportunities were seen and people are able to change their livelihood strategies. They are heading towards commercial farming, business has been started, and some people are moving to foreign in search of employment. Infrastructure is helping them to

get access on health centre's that is helping them to live healthy life, access on education is making better future of the study area, access on market has help them to fulfill their basic needs and productivity of land has been increase this has attract people to do agriculture activities rather to migrate Terai or India for seasonal work. Infrastructure development program has provided more to address the needs of people in terms of sustainable income source. Now, people are able to get awareness of their rights, discrimination based on voice, choice and rights due to this, the status of women and Dalits is improving. Women and Dalits now share their views and power in village activities and market linkage programs. As a result this sort of development program has positive impact on livelihood of people of study area.

6.3 Recommendation

As mention above small rural infrastructure is key factor for opening the new door of economic opportunities that helps upgrading the living standard of rural people. But due to lack of effective maintenance plan carelessness of the community the fruit of such development may not be sustainable. Likewise, being a costly infrastructure, it is important that it should be upgraded for increasing the durability of infrastructures. Following recommendation is made for the study area;

- From the field survey it has found that in the implementation process of infrastructure development it has found that participation of marginalized group and women is increasing significantly but there is lack of active participation from them. So focused should also be given in active participation.
- To maintain the assets community should take the responsibility then only the empowering process and sustainability will exist.
- This sort of sustainable program should be implemented in the VDC because now also the income generation 51.2% is below poverty line.
- People are not focusing on agriculture because of lack of information so government agencies should provide the information about the market of products and should make attractive business.
- Even there is a policy one house one toilet its has not been huge change in sanitation which is indirectly affecting in peoples livelihood more in women so awareness program should be conduct more and more with active participation of local community.

- For the future researcher it is recommended to do research on, "impact of small rural infrastructure on livelihood" in kudari VDC of jumla.

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ANNEX -I

Questioners on impact of Small Rural Infrastructure on Livelihood, Jumla District

District _____ Name of V.D.C _____

Ward no _____

Household survey

1) Respondent profile

A) How many members are currently living in your family?

Age	Male	Female
0-5		
6-16		
17-60		
Above 60		
Total		

B) Who is the head of your household?

☐Male

☐Female

C) Who makes the decision on your household?

☐Female

☐male

☐Both together

D) What is the main source of your house hold income?

☐Farming

☐Employment

☐remmmitence

☐Wages labour

☐Business

☐Other**…….**

E) What is your approximate household annual income?

☐More than 50 thousand

☐Less than 50 thousand

2) Infrastructure related information

A) Types of infrastructure built in your community?

☐Rural road

☐Irrigation

☐mule/Foot trial

☐Fruit orchard

☐Drinking water

☐School construction support

☐Toilet construction

☐Land improvement

☐other…….

B) Do you know which agencies have provided the inputs contribution to develop the infrastructure?

Agency	**Cash**	**Materials**	**Labour**	**Other**	**Specify others**
Community					
VDC					
DDC					

I/NGOs					
Specify others					

C) How do you see the quality of infrastructure created in your community? (If not satisfactory only go to Q-D)

- ☐Very strong(good)
- ☐Satisfactory
- ☐Not satisfactory
- ☐Don't know

D) If not satisfactory what are the reason you think?

- ☐Limited techinical skills
- ☐Limited costruction materials
- ☐Wrong site selection
- ☐other……

E) How are the created infrastructure being maintained?

- ☐By the community
- ☐BY DDC/V.D.C
- ☐By I/NGOs
- ☐By private sector
- ☐Others…….

3) Impact Related Information

A) Who mainly (directly) benifited from the developed infrastructure?(If few targeted people are benifited then only go to Q-B)

- ☐Entire targeted people in community
- ☐Most of the targetd people of community
- ☐Few targeted people in community

B) If few are benifited Who are they?

- ☐Landless
- ☐Womens groups
- ☐Mens groups

☐Land owners

☐Low caste group

☐High caste group

☐Others……

C) What happen to the trend of seasonal migration after project(infrastructure development) intervention?

☐Increase

☐Decrease

☐Remain same

D) What happen to the local Food markets after project intervention?

☐Insufficient food supply

☐Increased a avilability of food

☐Increased a varity of food

☐Decresed a varity of food

☐Increased a numbers of traders

☐New markets

☐Price hiking

☐Remained same

☐Others……

E) What benefits did you get from the created infrastructure?

☐Increased income

☐Increased employment apportunities

☐Increased a production of cash crops

☐Improved market access

☐Reduce a seasonal Migration

☐Improved health and sanitation

☐Others……..

F) What are the changes bought through the developed infrastructure?

☐Transportation Facility

☐Increased in road accident

☐Marekt accessibility

☐More economics activity

☐Increased HH expenses

☐Deforestation

☐Others……

THANK YOU

ANNEX-II

Questioners on impact of small rural infrastructure on Livelihood Jumla district

Key informant interview

A) Personal details

Name:

Ward no:

Occupation:

B) Infrastructure related and its developing process

1) Types of infrastructure built in community?

- ☐Rural road
- ☐Irrigation
- ☐Mule/foot trail
- ☐Fruit orchard
- ☐Land improvement
- ☐Drinking Water
- ☐Income generation
- ☐River Bank protection
- ☐Toilet construction
- ☐Medicinal and aromatic plant
- ☐Gully/soil erosion control
- ☐Other…….

2) Is committee formed to develop the assets?

Yes

No

3) Number of committee members

Total

Female

Dalit

Janajati

3) How often the people from dalit community/women rise their voices in committee meeting?(If not at all then only go to Q-4)

Yes

To some extent

Not at all

4) If not at all what do you think the reason is?

Lack of awareness

Traditional/cultural limitation

Lack of exposure/experience

Minor representation

Others…….

5) Which agencies have provided inputs contribution to create the infrastructure?

Agency	**Cash**	**Materials**	**Labour**	**Other**	**Specify others**
Community					
VDC					
DDC					
I/NGOs					
Specify others					

6) Did committee and community have planned to maintain the created assets?

Yes

No

Don’t know

C) Infrastructure impact information

7) Did all the targeted people are benefited from the developed assets?

Yes

No

8) If no what are the reason you think?

Wrong site selection

Political influence

Lack of monitoring

Others…….

9) How do you see the quality of assets that have been created?

Very strong

Satisfactory

Not satisfactory

Don’t know

10) If not satisfactory what are the reason?

Limited technical skills

Limited construction materials

Wrong site selection

Limited technical support

Others……..

11) How did the assets influence in people income?

Increased

- Decrease
- Remained same

12) What benefits did community get from the assets?

- Increased income
- Increased in employment opportunities
- Improved market access
- Increased in production of cash crops
- Improved in health and sanitation
- Reduce a seasonal migration
- Others……..

13) What are the changes bought through the assets in community?

- Transportation facility
- Market accessibility
- More economics activities
- Deforestation
- Soil erosion
- Increased productivity
- Increased in road accident

Thank you

Annex-III

Name List of Key Person who were Interviewed

S.N	Name of the Respondent	Sex	Post
1	Dil Bahadur Hamal	Male	Politician
2	Bimala Sahi	Female	Employer
3	Dipak Bhattari	Male	Business Man
4	Kali Bahadur Buda	male	Contractor
5	Lal kuwara Sunwar	Female	Member Infrastructure Development Committee
6	Sumitra Buda	Female	Teacher
7	Dhan Bahadur Buda	male	Teacher
8	Santoshi Mahat	Female	VDC Social Mobilizer
9	Lalti Sahi	Male	Business
10	Raj Kuwara Nepali	Female	Housewife
11	Dal Bahadur Sahi	Male	President of Infrastructure Development Committee
12	Saraswati Pandey	Female	Politician
13	Shiva Kumari Yogi	Female	Housewife
14	Khummira Sarki	Female	Employer
15	Santosh Sarki	Male	Carpenter