Government of Nepal

District Transport Master Plan (DTMP)

Ministry of Federal Affairs and Local Development

Department of Local Infrastructure Development and Agricultural Roads (DoLIDAR)

District Development Committee, **Humla**

Volume I: Main Report

April, 2013

Prepared by the North Star Engineering Consultant (P) Ltd for the District Development Committee (DDC) and District Technical Office (DTO), Humla with Technical Assistance from the Department of Local Infrastructure Development and Agricultural Roads (DoLIDAR), Ministry of Federal Affairs and Local Development and grant supported by DFID

FOREWORD

Government of Nepal
Ministry of Federal Affairs and Local Development
Office of District Development Committee
Simkot, Humla

Date: - 17th April, 2013

FOREWORD

It is my great pleasure to introduce this revised District Transport Master Plan (DTMP) of Humla, district which was concurred and approved by the joint meeting of district stakeholder's and DDC board held on 17th April 2013. Before approving the DTMP, DRCN was passed by the joint meeting of district stakeholder's and DDC board held on 10th April 2013. Based on the DTMP Guideline 2012, all together 17 District Road Core Network (DRCN) aiming to connect all Village Development Committee (VDC) headquarters with the district headquarter, either directly or through strategic road network (SRN) have been selected. By bringing the DRCN to a maintainable and all-weather standard, year-round access to all VDCs headquarters can be ensured.

I believe this document will be helpful to materialize Rural Transport Infrastructure Sector Wide Approach (RTISWAp) through sustainable planning, resources mobilization, implementation and monitoring of the road development. The document is anticipated to generate substantial employment opportunities for rural people through conservation, improvement and new construction activities of the existing road network. DRCN plays an important role to strengthen and promote overall economic growth of the district through established and improved year round transport services reinforcing intra and inter-district linkages. It is most crucial to expand DRCN in a planned way as per the DTMP recommendations by considering the framework of available resources in DDC. This document is very essential in lobbying the donor agencies through central government to attract fund gap. Furthermore, this document will be supportive in avoiding prevailing duplication in resources allocation in road network development by considering basket fund approach.

I would, firstly like to express my gratitude to RTI Sector Maintenance Pilot for financial and technical support. Secondly, my thanks go to, Acting District Engineer (DTO) Mr. Devi Aidi, Planning Officer Mr.Ujir Rokaya, Er.Birendra Shai (LGCDP), other DDC/ DTO staff for their valuable efforts in the process of producing this document. Equally, I would like to thank Mr. Ganesh Prasad Eshwar, Team Leader from North Star Engineering Consultant for their continuous dedication and hard-work in bringing this DTMP document to this stage. My special thank goes to all the representatives of political parties, who played crucial role in providing constructive feedbacks and valuable support in preparing this document successfully.

Last but not least, I would like to express my heartfelt gratitude to Ministry of Federal Affairs and Local Development (MFALD) and Department of Local Infrastructure Development and Agriculture Road (DoLIDAR/MFALD) for providing valuable suggestions and cooperation to produce this report. Any pioneering and constructive suggestions regarding this document will be highly appreciated.

.....
Mr.Naresh Prasad Dhakal
Local Development Officer

PREFACES/ACKNOWLEDGEMENT

The District Transport Master Plan of Humla District has been prepared for RTI Sector Maintenance Pilot, DoLIDAR under the Contract Agreement between RTI Sector Maintenance Pilot and North Star Engineering Consultant (P) Ltd [Contract No. RTI Sector_DTMP/001/012] to carry out the task of updating / preparing of DTMP of Humla District of Nepal.

We would like to express our sincere gratitude to the Project Co-coordinator Mr. Ganga Bahadur Basnet (SDE), and Team leader Mr. Michael Green, DTL Mr. Dilli Prakash Sitaula and Er. Manoj Krishna Shrestha of RTI Sector Maintenance Pilot whose valuable co-operation and suggestions guided us to accomplish the agreed task to this level. Account and Administrative personnel of the project are also thankful for their liberal cooperation in the financial and administrative dealings. We would also like to convey our sincere thanks to LDO of Humla DDC, Mr. Naresh Prasad Dhakal, DTO Chief Mr. Devi Aidi, Planning officer of Humla DDC Mr. Ujir Rokaya, Engineers, Sub-engineer and other staffs of DDC and DTO, Humla for their extended help and regular support and coordination at different levels while working at the field level.

The local leaders and local people from Humla District are also thankful for their help and suggestion for the selection and identification of the District Road Core Network. We hope, this updated / prepared DTMP of Humla District will be very helpful and a valuable guideline for the planning and development of effective and systematic transport network in Humla District.

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Dhruba Raj Tripathi
Managing Director
North Star Engineering Consultant (P). Ltd.

EXECUTIVE SUMMARY

Humla District, which is one of Nepal's highest and most inaccessible district is located in Karnali Zone of the Mid-Western Development Region of Nepal. The district headquarters Simkot is still not connected with national road network. But, from Northern border Tibet, the fair weather transport facilities are available 40 km inside from Hilsa and 58 km inside from Limi towards the district headquarters. The adjacent districts are Mugu and Tibetian region of China in the East, Bajhang and Tibetan region of China in the West, Bajhang and Bajura in the South and Tibetian region of China in the North side. The district extends from 29^0 35' North to 30^0 57' North latitude and from 81^0 18' East to 82^0 10' East in longitude. Most of the district falls in high Himalayan and high Mountain range. The district has 27 VDCs, 9 Ilakas and 1 constituency areas. The district has total area of 5,655 sq. km, which covers 5% of the total land of the country.

Population of Humla is 49, 933 according to 2011 census, whereas male is 25,077 and female is 24,856 respectively. Average literacy rate of the district is 42%, whereas male literacy rate is 54% and female literacy rate is 29% respectively. Life expectancy is 53 years, with many children dying from lack of healthcare, unsafe water, and chronic malnutrition. The climate is harsh, with snow for up to four months of the year. The minimum and maximum altitudes are 4000 ft and 24064 ft respectively from the sea level. The most villages are lying at about 3000 m to 5,000 m above sea level. The minimum temperature is minus 10^0 to minus 28^0 Celsius and maximum temperature is 10^0 to 35^0 Celsius in the winter and summer respectively in the year. Similarly, the average annual rainfall is 25.4 to 146.9 mm. Manasarobar and Kailashkut in Tibet is tourism centre which can be reached by following tracking route of Humla district.

The district inventory identified 128 km of SRN existing earthen roads and no single km DRCN road length exists in the district.

Road Class	Total length	Black Top	Gravel	Earthen
Strategic roads	128.00	-	-	128.00
Urban roads	-	-	-	-
Rural roads				
Total	**128.00**			**128.00**

There is no any existing DRCN road, so no conservation and improvement costs are needed to this DTMP period. All new alignments for DRCN have been proposed and the cost estimates for new construction have been calculated regarding the DTMP i.e.NRs.2028.495 million.

Improvement type	Requirement		Cost (NPR)
Bridges	354	m	-
Slab culverts	0	m	-
Causeways	0	m	-
Hume pipes	0	units	-
Masonry retaining walls	0	m^3	-
Gabion retaining walls	0	m^3	-
Lined drains	0	m	-

Widening	0	m	-
Rehabilitation	0	km	-
Gravelling	0	km	-
Blacktopping	0	km	-
New construction	172.82	km	2,028,494,617
Total			**2,028,494,617**

The available budget for the road sector for coming five years (fiscal year 2070/71 to 2074/75) is estimated to be NPR 1231.216 million. Allocation to the district road core network was set at 90% of the total road sector budget, which was subsequently allocated firstly to new construction. This budget is insufficient to cover all the estimated costs of new construction, but 70.96 km remaining alignments, will be carried out in the next DTMP.

Within the DTMP period, 101.86 km of roads will be gravelled (59%) resulting that length being brought to a maintainable all-weather standard. VDC headquarters with access to all-weather DRCN roads or the SRN will increase from 0 to 18, while the percentage of the district population with such access will increase from 0% to 67%.

ABBREVIATIONS

ARMP	Annual Road Maintenance Plan
DDC	District Development Committee
DoLIDAR	Department of Local Infrastructure Development and Agriculture Road
DoR	Department of Road
DTICC	District Transport Infrastructure Coordination Committee
DTMP	District Transport Master Plan
DTPP	District Transport Perspective Plan
DRILIP	Decentralization of Rural Infrastructure and Livelihood Improvement programme
ER	Earthen Road
GIS	Geographical Information system
GPS	Global Positioning System
GON	Government of Nepal
GR	Gravel
LGCDP	Local Governance and Community Development Programme
MOFALD	Ministry of Federal Affairs and Local Development
NPR	Nepali Rupees
PCU	Passenger Car Unit
RAP	Rural Access Programme
RCIW	Rural Community Infrastructure Works
Swap	Sector Wide Approach
VDC	Village Development Committee
Km	Kilometer
KEP	Karnali Employment Programme
VPD	Vehicle per day

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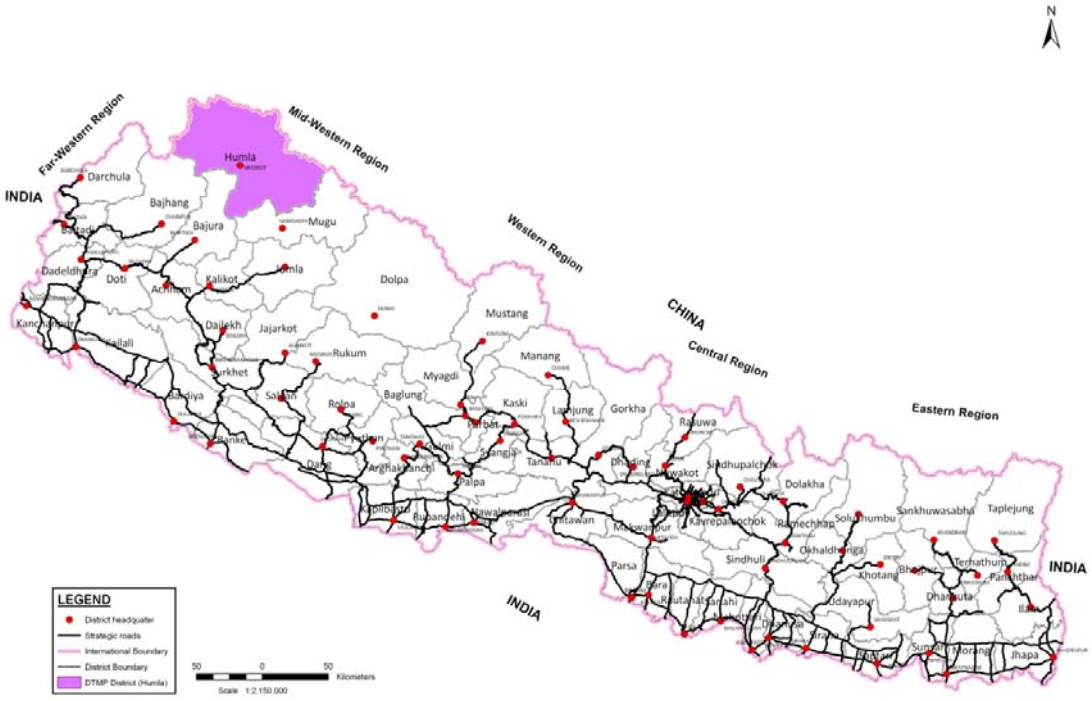
1. INTRODUCTION

Humla district is located in Karnali Zone of the Mid-Western Development Region of Nepal. The district headquarters Simkot is still not connected with national road network. The adjacent districts are Mugu and Tibetian region of China in the East, Bajhang and Tibetan region of China in the West, Bajhang and Bajura in the South and Tibetian region of China in the North side. The district extends from 29^0 35' North to 30^0 57' North latitude and from 81^0 18' East to 82^0 10'East in longitude. Most of the district falls in high Himalayan and high Mountain range. The district has 27 VDCs, 9 Ilakas and 1 constituency areas. The district has total area of 5,655 square km, which covers 5% of the total land of the country.

Population of Humla is 49, 933 according to 2011 census, whereas male is 25,077 and female is 24,856 respectively. Average literacy rate of the district is 42%, whereas male literacy rate is 54% and female literacy rate is 29% respectively. Life expectancy is 53 years, with many children dying from lack of healthcare, unsafe water, and chronic malnutrition. The climate is harsh, with snow for up to four months of the year. The minimum and maximum altitudes are 4000 ft and 24064 ft respectively from the sea level. The most villages are lying at about 3000 m to 5,000 m above sea level. The minimum temperature is minus 10^0 to minus 28^0 Celsius and maximum temperature is 10^0 to 35^0 Celsius in the winter and summer respectively in the year. Similarly, the average annual rainfall is 25.4 to 146.9 mm. Manasarobar and Kailashkut in Tibet is tourism centre which can be reached by following tracking route of Humla district.

Figure 1 Map of Nepal indicating Humla District



Total household is 7735, and average family size is 6.4. Humla district has an average population density of around 8 people per square km. The district has a multi ethnic with Chhetri/Thakuri (31.4%), Brahman (27.72%), Lama (14.47%), Dalit (13.53), Byasi (11.02%), Janajati (0.31%) and other castes (1.55%).

85.5% people speak Nepali Humli Khash language and remaining 14.5% people speak Lama Kham/Bhote language for daily communication. Similarly, the religious castes have occupied as Hindus (83.9%), Buddhist (16.06%) and Christian (0.04%) respectively.

A major economic activity of the people of the district depends on agricultural production. More than 88% of the district population is involved in agriculture but only 25% households have sufficient food from their own agriculture land. Only 8729 ha land is suitable for agriculture out of 565,500 ha area of this district. Maize, millet, Jau, buckwheat and wheat are major crops grown in the district. Apart from them paddy, Uwa and chino are also grown in the district. No commercial vegetable farming is produced right now in the district, but people are attracted in kitchen gardening, which fulfils their daily requirement. Fruit farming is also popular in the district. Most of the agriculture land of the district is monsoon irrigated. Most of the families are rearing domestic animals like yak, buffalo, Jhuma, Jhopa cattle, sheep, goat etc. Pig and birds like chicken, duck and pigeon are rearing as income generating activities. There is serious problem of youth unemployment.

Tourism is an important activity for economic growth of the country which contributes more than 8% of the national economic production. The district can promote tourism industry by attracting internal and foreign tourists as the tourism destination. The district is the main route to famous Mansarobar, Kailashkut Parbat being transit to Bjhang, Bajura, Mugu districts and Tibet autonomous region of China. Major existing and potential tourist areas are located in Muchu, Limi, Khagalgau, Thehe, Dandaphaya, Simkot, Bargau, Kharpunath, Saya, Gothi, Jair, Melchham, Maila, Madana and Shreenagar which are famous for natural lovers and researcher since variation in latitude.

There are only three hydro powers at Thehe, Muchu (Yalbang) and Simkot(Burause) producing 50kw, 25kw, and 2kw power respectively. The district is very rich in hydropower resources. The Humla Karnali River flow nearly central part of the district. There are many other small rivers and streams in the district, which can be used for hydropower development. The potential area are Muchu, Simkot, Bargau, Kharpunath, Lali, Shreemastha, Khagalgau, Dandaphaya, Saya, Jair, Melchham, Darma, Maila, Shreenagar and Madana.

Although Humla is second inaccessible district of the country, there is no access to District Headquarters except Hilsa-Simkot Road (40 km) and Limi-Lapcha Road (58 km) constructed from China Boarder with motorable fair weather. The Government strategy is currently focused on the two major feeder roads viz. Hilsa-Simkot and Kawadi -Sallisalla -Simkot.

2. DISTRICT ROAD CORE NETWORK (DRCN)

This chapter gives an overview of the existing roads in Humla district, distinguishing between strategic roads and rural roads. It goes on to identify those rural roads that make up the district road core network (DRCN) that will form the basis for this DTMP. The remaining rural roads are classified as village roads.

2.1 TOTAL ROAD NETWORK

Humla district has an estimated road network of 128.00 kilometres of strategic roads managed by DOR. The strategic roads have earthen surface. A map of the total road network in Humla district is shown in figure 2 at the end of this chapter.

Table 2.1.1Total Road length existing in Humla Distict (km)

Road Class	Total length	Black Top	Gravel	Earthen
Strategic roads	128.00	-	-	128.00
Urban roads	-	-	-	-
Rural roads	-			-
Total	**128.00**	**-**	**-**	**128.00**

2.2 NATIONAL HIGHWAYS AND FEEDER ROADS

Humla district has three feeder roads totalling 128.00 km, treated as strategic roads in this DTMP. DOR does not provide the road code of Limi-Lapcha feeder road. Detail status of the feeder road is given in table 2.2.1 below.

Table 2.2.1National Highways and Feeder Roads in Humla District (km)

Code	Name of Road	Total length	Black Top	Gravel	Earthen
F14501	Hilsa(IB)-Simkot Road	**40.00**			40.00
F17205	Kawadi-Sallisalla-Simkot Road	**30.00**			30.00
	Limi-Lapcha Road	**58.00**			58.00
		-			
		-			
Total		**128.00**	**0.00**	**0.00**	**128.00**

2.3 DISTRICT ROAD CORE NETWORK

As part of the preparation of this DTMP, the District Road Core Network (DRCN) was identified together with the DTICC and DDC. There is no existing DRCN that allows all VDC headquarters to be connected with the strategic road network and the district headquarters, either directly or through other VDCs. The new identified DRCN roads were subsequently provided with road codes according to national standards.

The resulting District Road Core Network in Humla district is shown in Figure 3 at the end of this chapter. The DRCN consists of 17 proposed district roads with a total length of 172.82

km. All DRCN Roads are new alignments. A complete list of the DRCN roads and their characteristics is provided in table 2.3.2.

Table 2.3.1Total Road length in Humla District (km)

Road Class	Total length	Black Top	Gravel	Earthen
Strategic road network	**128.00**	**-**	**-**	**128.00**
Highways	-			
Feeder roads	128.00			128.00
Urban roads	**-**	**-**	**-**	**-**
District road core network	**-**	-	-	-
Village roads	**-**	-	-	-
Total	**128.00**	**-**	**-**	**128.00**

Table 2.3.2 District Road Core Network in Humla District (km)

Code	Name of Road	New VDCs	Existing length	New length	Bridge (m)
66DR001	Tankchhe-Halji Road	Limi	-	18.67	
66DR002	Chhipra-Syada-Khagalgaun Road	Chhipra,Syada,Khagalgaun	-	22.37	97
66DR003	Dandafaya-Hepka Road	Dadafaya,Hepka	-	8.55	25
66DR004	Chhipra-Raya-Sarkeedeu Road	Chhipra,Raya,Sarkeedeu	-	22.91	42
66DR005	Simkot-Bargaun-Thehe-Kharpunath Road	Simkot,Bargaun.Thehe,Kharpunath	-	10.41	25
66DR006	Kharpunath VDC Link Road	Kharpunath	-	4.07	
66DR007	Bokcheguda-Lali VDC Link Road	Lali	-	1.35	
66DR008	Sarkegad-Saya-Barai Road	Barai,Saya	-	5.73	
66DR009	Sarkegad-Gothi-Rodikot Road	Saya,Gothi,Rodikot	-	5.74	20
66DR010	Kawadi-Madana Road	Maila,Madana	-	12.98	45
66DR011	Madana-Kalika Road	Madana,Kalika	-	7.58	
66DR012	Galphagad-kalika Road	Kalika,Shreenagar	-	10.31	
66DR013	Jair VDC Link Road	Jair	-	5.49	
66DR014	Melchham VDC Link Road	Shreemastha,Melchham	-	3.71	
66DR015	Shreemastha VDC Link Road	Shreemastha	-	3.63	
66DR016	Mimi VDC Link Road	Mimi		1.94	
66DR017	Chankheli-Piplang-Sallisalla Road	Darma,Mimi,Shreemastha,Melchham	-	27.40	100
Total			**-**	**172.82**	**354**

Justification for selection of Chankheli-Piplang-Sallisalla road as DRCN (27.40km)

A district road is being constructed by Mugu District and completed 6 km inner from boarder of Mugu and Humla i.e. Chankheli. The road will be shortest route to link Mugu district with Simkot delivering transport facility to the people of 4 VDCs of the southern- east part of Humla. A joint meeting of DDC and stakeholders held on 2 April 2013, decided to rank this road at top and request to the donor agencies like RAP and DRILIP funding accordingly. The meeting further decided to allocate NPR one hundred thousand by all 27 VDCs being the top prioritised road of district except SRN.

2.4 VILLAGE ROADS

Humla district is one of the 74th less developed and remote district of Nepal. The district headquarters is not yet connected to fair weather SRN. The district has very low road density and proposed alignment identified are moreover district road core network (DRCN). There are some alignments proposed by DTICC/DDC meeting as village roads (202.99 km in different VDCs) of a lower importance which do not form the main link between the VDC headquarters and the district headquarters or strategic road network. Instead, they provide additional access to other parts of the VDCs.

Table 2.4.1 Village Road Core Network in Humla District (km)

Road Code	Road Name	Length(Km)
66VR001	Hilsa-Tila-Halji Road	27.00
66VR002	Muchu-Chala Road	16.79
66VR003	Okharthala-Tatopani-Chhahare Road	9.51
66VR004	Sechi-Langduk-Simkot Road	15.00
66VR005	Simkot-Hildum Road	3.34
66VR006	Hutik-Raling Gumba Road	4.75
66VR007	Thehe Dojam-Taku Road	6.50
66VR008	Sarkeedeu-Kalika Link Road	19.00
66VR009	Kawadi-Ghatmana-Gimana-kandagaun Road	6.80
66VR010	Paima-Maila-Badechaur-Maspur Road	33.50
66VR011	Maila Sirpata-Shreengar Road	15.30
66VR012	Sarkeedeu-Unapani-Gunsa-Makai Road	12.50
66VR013	Piplang-Nepka-Tanke Road	33.00
	Total	**202.99**

Figure 2 Total Road Inventory

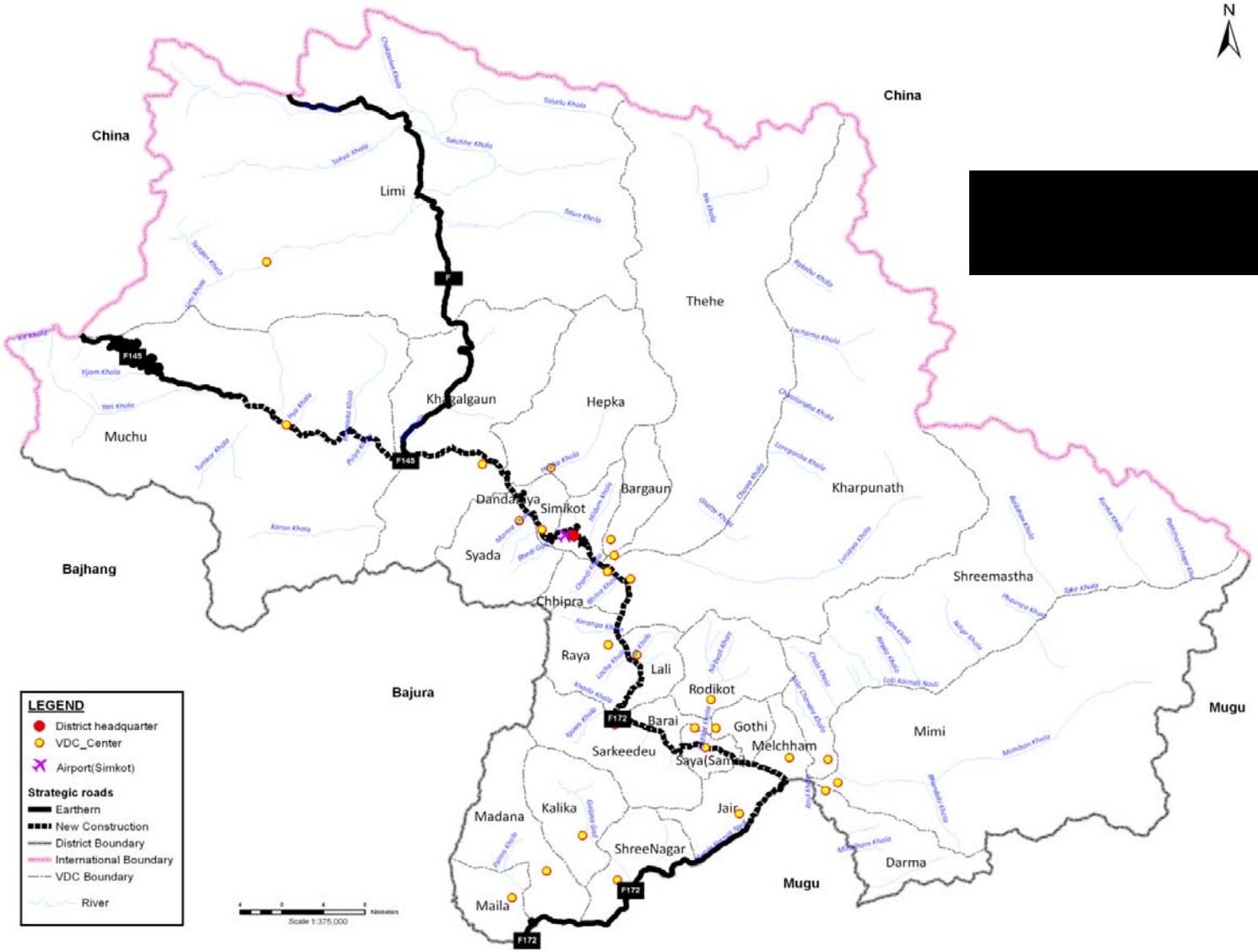


Figure 3 District Road Core Network (DRCN)

3. DISTRICT TRANSPORT PERSPECTIVE PLAN (DTPP)

This chapter looks at the required interventions regarding conservation, improvement and new construction of the district road core network. It provides a complete list of all works required in the DRCN, which together form the District Transport Perspective Plan (DTPP). For the works forming part of the DTPP, chapter 4 will subsequently provide cost estimation, while chapter 5 will rank the works according to priority and chapter 6 will select those priority works that can be carried out in the next 5 years and thus form part of the District Transport Master Plan (DTMP).

3.1 CONSERVATION

Conservation refers to the actions required to repair a road and keep it in good and passable condition. For DTMP planning purposes standard costs per kilometre for each maintenance type are applied to the entire district road core network, whereby for certain maintenance type's distinction is made according to the surface type of the road. Identification of the actual maintenance requirements of each road is made annually in the ARMP. Conservation activities include:

1. Emergency maintenance - Basic repairs aimed at removing landslides and repairing damage to the road that inhibit the proper use of the road and make it impassable. This mainly takes place during and after the rainy season. A provisional lump sum is reserved for the entire district road core network based on the network length. Allocation to specific road sections is based on the actual need for clearing landslides or repairing washouts and cuts in the road.
2. Routine maintenance - General maintenance of the road aimed at preventing damage by ensuring the proper working of the different road elements (retaining walls, drainage system, carriageway, etc.) and cutting vegetation. This is carried out each year on a more or less continuous basis. Routine maintenance is required for the entire district road core network. The specific requirements for routine maintenance are determined on an annual basis through the road condition survey and defined in the ARMP.
3. Recurrent maintenance - Repairs of minor damage to the road surface and road structures to bring them back to good condition. This is generally carried out once or twice a year. Recurrent maintenance is required for the entire district road core network, whereby distinction is made according to the surface type. The specific requirements for recurrent maintenance are determined on an annual basis through the road condition survey and defined in the ARMP.
4. Periodic maintenance - Larger repairs to the road largely aimed at renewing the road surface through re-gravelling, resealing or overlays. It is generally carried out with several years interval. Although periodic maintenance is only required for specific sections of the district road core network, a lump sum allocation is made for the entire district road core network based on average annual requirements, distinguishing between different surface types. The specific periodic maintenance requirements are determined on an annual basis through the annual road condition survey and defined in the ARMP.

In the case of Humla district, volume of traffic is very few in SRN with fair weather service. There are no any DRCN on which traffic can play over, thus all four type of conservation is not applicable. Hence, fully new constructions roads have been recommended from DTICC and included in this DTMP.

Table 3.1.1Conservation requirements

Code	Emergency maintenance (km)	Routine maintenance (km)	Recurrent maintenance (km)	Periodic maintenance (km)
Total				

3.2 IMPROVEMENT

Improvement refers to actions required to improve a road to bring it to a maintainable all-weather standard. It includes the following actions. There is no any DRCN exists in Humla district so that following interventions are not applicable.

1. Rehabilitation - Significant repairs required to bring a very poor road back to a maintainable standard. This does not include any changes to the original surface type.
2. Gravelling - Placement of a gravel layer to make it all-weather and ensure that the road remains passable during the rainy season.
3. Cross drainage - Placement of suitable cross-drainage structures with the aim of making the road all-weather and ensuring that the road remains passable even during the rainy season
4. Protective structures - Placement of retaining walls and lined side drains to avoid excessive damage to the road during the rainy season and bring it to a maintainable standard.
5. Blacktopping - Placement of a blacktop layer in roads with traffic volumes exceeding 50 passenger car units (PCU) to reduce damage to the road surface
6. Widening - Increase of the road width in roads with traffic volumes exceeding 500 passenger car units (PCU) to ensure the proper flow of traffic.

3.2.1 REHABILITATION

Since there is no any DRCN exists in district, rehabilitation work is not required in Humla district.

Table 3.2.1Sections of the district road core network requiring rehabilitation

Code	Description	Total length (km)	Gravelling (km)
Total		**0.00**	**0.00**

3.2.2 GRAVELLING

As the entire district road core network needs to be brought to an all-weather status, gravelling of the road surface is required for all the earthen sections in the DRCN. But, there is no existing DRCN in the district. So, the gravelling intervention is also not applicable in Humla district.

Table 3.2.2 Sections of the district road core network requiring gravelling

Code	Description	Total length (km)	Gravelling (km)
Total			

3.2.3 CROSS DRAINAGE

Following proposed new roads crosses different Khola and rivers, over which need 14 nos. of 354 m bridges to bring road all weather as shown in table.

Table 3.2.3 Required cross drainage structures

Code	Name of Road	length	Total Proposed Bridge length (m)
66DR002	Chhipra-Syada-Khagalgaun Road	22.37	97
66DR003	Dandafaya-Hepka Road	8.55	25
66DR004	Chhipra-Raya-Sarkeedeu Road	22.91	42
66DR005	Simkot-Bargaun-Thehe-Kharpunath Road	10.41	25
66DR009	Sarkegad-Gothi-Rodikot Road	5.74	20
66DR010	Kawadi-Madana Road	12.98	45
66DR017	Chankheli-Piplang-Sallisalla Road	27.40	100
Total		**172.82**	**354**

3.3 NEW CONSTRUCTION

Total DRCN roads are new alignments which have been proposed for new construction during DTMP. New construction of DRCN roads is required to connect all VDC headquarters. A list of proposed roads for new construction is provided below. These roads will provide access to 27 VDC HQs that do not currently have road access.

Table 3.3.1Section of district road core network requiring new construction

Code	Name of Road	New VDCs	Existing length	New length	Bridge (m)
66DR001	Tankchhe-Halji Road	Limi	-	18.67	
66DR002	Chhipra-Syada-Khagalgaun Road	Chhipra,Syada,Khagalgaun	-	22.37	97
66DR003	Dandafaya-Hepka Road	Dadafaya,Hepka	-	8.55	25
66DR004	Chhipra-Raya-Sarkeedeu Road	Chhipra,Raya,Sarkeedeu	-	22.91	42
66DR005	Simkot-Bargaun-Thehe-Kharpunath Road	Simkot,Bargaun.Thehe,Kharpunath	-	10.41	25
66DR006	Kharpunath VDC Link Road	Kharpunath	-	4.07	

Code	Name of Road	New VDCs	Existing length	New length	Bridge (m)
66DR007	Bokcheguda-Lali VDC Link Road	Lali	-	1.35	
66DR008	Sarkegad-Saya-Barai Road	Barai,Saya	-	5.73	
66DR009	Sarkegad-Gothi-Rodikot Road	Saya,Gothi,Rodikot	-	5.74	20
66DR010	Kawadi-Madana Road	Maila,Madana	-	12.98	45
66DR011	Madana-Kalika Road	Madana,Kalika	-	7.58	
66DR012	Galphagad-kalika Road	Kalika,Shreenagar	-	10.31	
66DR013	Jair VDC Link Road	Jair	-	5.49	
66DR014	Melchham VDC Link Road	Shreemastha,Melchham	-	3.71	
66DR015	Shreemastha VDC Link Road	Shreemastha	-	3.63	
66DR016	Mimi VDC Link Road	Mimi	-	1.94	
66DR017	Chankheli-Piplang-Sallisalla Road	Darma,Mimi,Shreemastha,Melchham	-	27.40	100
Total			**-**	**172.82**	**354**

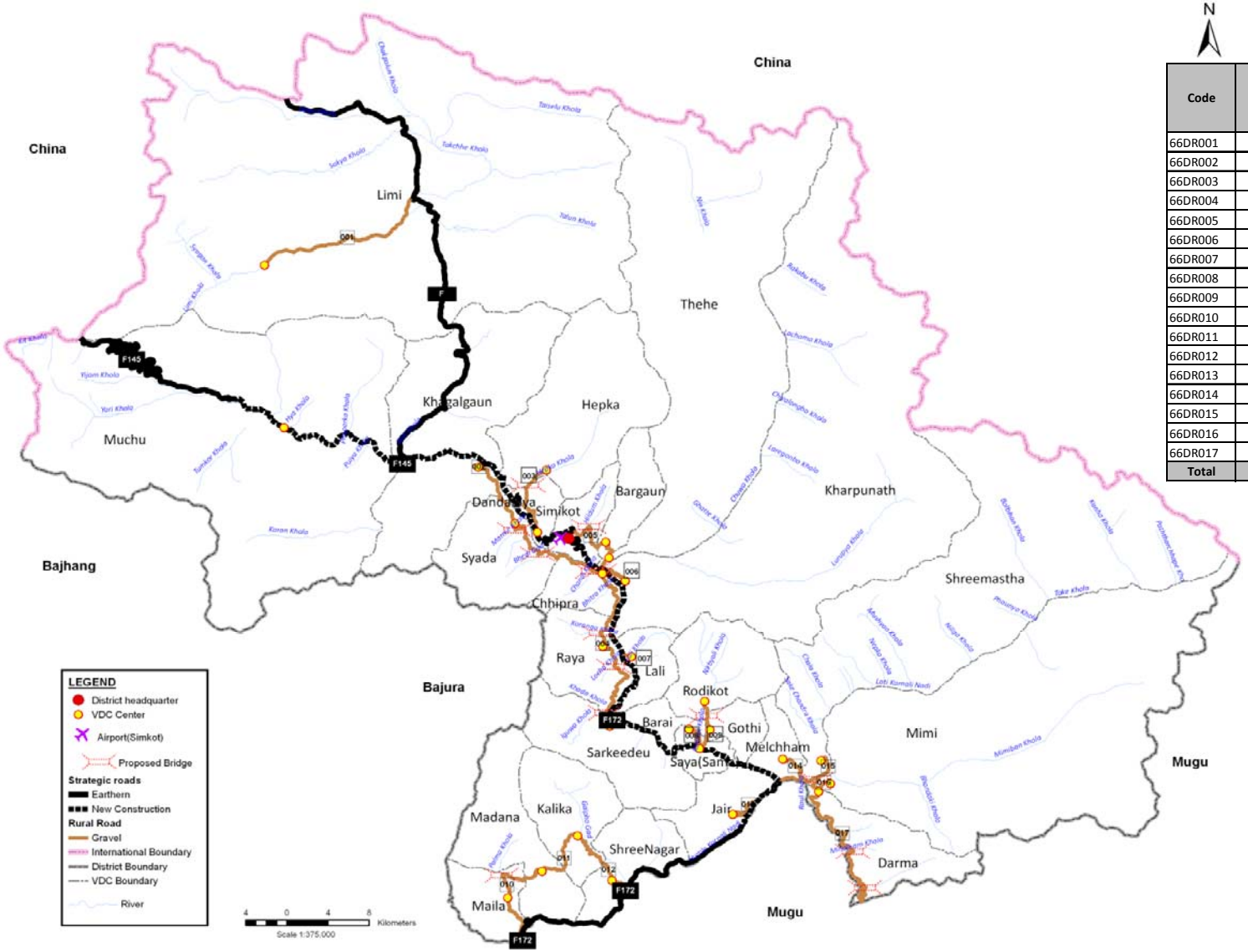
3.4 DISTRICT TRANSPORT PERSPECTIVE PLAN

The DTPP foresees bringing the entire existing District Road Core Network to maintainable all-weather status, and expanding it to provide access to an additional VDC headquarters. There are not any roads included in DRCN. Therefore, 172.82 km of new road will be constructed as all-weather gravel standard to provide access to 27 VDC HQs. Following table lists the required interventions, while the proposed network is shown in the DTPP map in figure 4.

Code	Emergency maintenance (km)	Routine maintenance (km)	Recurrent maintenance (km)	Periodic maintenance (km)	Rehabilitation (km)	Gravelling (km)	Blacktopping (km)	Widening (m)	Bridge (m)	Slab culvert (m)	CC Causeway (m)	Stone Causeway (m)	Pipe culvert (units)	Masonry walls (m3)	Gabion walls (m3)	Lined drain (m)	New construction (km)
66DR001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.67
66DR002	-	-	-	-	-	-	-	-	97.00	-	-	-	-	-	-	-	22.37
66DR003	-	-	-	-	-	-	-	-	25.00	-	-	-	-	-	-	-	8.55
66DR004	-	-	-	-	-	-	-	-	42.00	-	-	-	-	-	-	-	22.91
66DR005	-	-	-	-	-	-	-	-	25.00	-	-	-	-	-	-	-	10.41
66DR006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.07
66DR007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.35
66DR008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.73

Code	Emergency maintenance (km)	Routine maintenance (km)	Recurrent maintenance (km)	Periodic maintenance (km)	Rehabilitation (km)	Gravelling (km)	Blacktopping (km)	Widening (m)	Bridge (m)	Slab culvert (m)	CC Causeway (m)	Stone Causeway (m)	Pipe culvert (units)	Masonry walls (m3)	Gabion walls (m3)	Lined drain (m)	New construction (km)
66DR009	-	-	-	-	-	-	-	-	20.00	-	-	-	-	-	-	-	5.74
66DR010	-	-	-	-	-	-	-	-	45.00	-	-	-	-	-	-	-	12.98
66DR011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.58
66DR012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10.31
66DR013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.49
66DR014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.71
66DR015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.63
66DR016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.94
66DR017	-	-	-	-	-	-	-	-	100.00	-	-	-	-	-	-	-	27.40
Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**354**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**172.82**

Figure 4 District Transport Perspective Plan (DTPP)



Code	Total length	Surface Type			
		Black Top	Gravel	Earthern	New Construction
66DR001	18.67	-	18.67	-	-
66DR002	22.37	-	22.37	-	-
66DR003	8.55	-	8.55	-	-
66DR004	22.91	-	22.91	-	-
66DR005	10.41	-	10.41	-	-
66DR006	4.07	-	4.07	-	-
66DR007	1.35	-	1.35	-	-
66DR008	5.73	-	5.73	-	-
66DR009	5.74	-	5.74	-	-
66DR010	12.98	-	12.98	-	-
66DR011	7.58	-	7.58	-	-
66DR012	10.31	-	10.31	-	-
66DR013	5.49	-	5.49	-	-
66DR014	3.71	-	3.71	-	-
66DR015	3.63	-	3.63	-	-
66DR016	1.94	-	1.94	-	-
66DR017	27.40	-	27.40	-	-
Total	**172.8**		**172.8**		

4. COST ESTIMATION

For the cost estimation, standard costs have been used for the different activities required. For the conservation activities this results in an estimation of annual costs, while for improvement and new construction activities this result in an estimation of the total costs required. Cost estimation of the Conservation and improvement activities is not entertain in this report since there is no any existing roads in Humla district.

4.1 NEW CONSTRUCTION

The costs of the required new construction have been calculated using the following standard costs based on the district rate analysis. The rate of bridge is taken from DPR of DOR being constructed over Karnali River border of Nepal and China. Rate of track opening and gravelling is increased by 40% and 30% respectively due to high district labour rate. These standard costs have been applied to the entire district road core network, whereby distinction is made based on the surface type.

Table 4.1.1 Standard unit costs for new construction

Activity	Unit	Unit cost (NPR)
Track opening	km	5,600,000
Gravelling	km	2,860,000
Bridge construction	m	1,600,000

Based on this cost, total cost for new constructions as gravelling standard of the DRCN for the next 5 years is estimated at NPR 2028.495 million. These costs will change slightly as the roads are improved and the standard construction costs change. This will be updated in the ARMP on an annual basis.

Table 4.1.2 Estimated new construction costs for the first year (NPR '000)

Code	Name of Road	New length (km)	Opening up (NPR)	Gravelling (NPR)	Bridges (NPR)	Total cost (NPR)
66DR001	Tankchhe-Halji Road	18.67	104,554	53,397	-	**157,951**
66DR002	Chhipra-Syada-Khagalgaun Road	22.37	125,265	63,975	155,200	**344,440**
66DR003	Dandafaya-Hepka Road	8.55	47,880	24,453	40,000	**112,333**
66DR004	Chhipra-Raya-Sarkeedeu Road	22.91	128,289	65,519	67,200	**261,008**
66DR005	Simkot-Bargaun-Thehe-Kharpunath Road	10.41	58,295	29,772	40,000	**128,066**
66DR006	Kharpunath VDC Link Road	4.07	22,801	11,645	-	**34,445**
66DR007	Bokcheguda-Lali VDC Link Road	1.35	7,560	3,861	-	**11,421**
66DR008	Sarkegad-Saya-Barai Road	5.73	32,088	16,388	-	**48,476**
66DR009	Sarkegad-Gothi-Rodikot Road	5.74	32,144	16,416	32,000	**80,560**
66DR010	Kawadi-Madana Road	12.98	72,672	37,115	72,000	**181,787**
66DR011	Madana-Kalika Road					

Code	Name of Road	New length (km)	Opening up (NPR)	Gravelling (NPR)	Bridges (NPR)	Total cost (NPR)
		7.58	42,428	21,669	-	**64,097**
66DR012	Galphagad-kalika Road	10.31	57,722	29,479	-	**87,201**
66DR013	Jair VDC Link Road	5.49	30,730	15,694	-	**46,425**
66DR014	Melchham VDC Link Road	3.71	20,793	10,619	-	**31,412**
66DR015	Shreemastha VDC Link Road	3.63	20,310	10,373	-	**30,683**
66DR016	Mimi VDC Link Road	1.94	10,858	5,545	-	**16,404**
66DR017	Chankheli-Piplang-Sallisalla Road	27.40	153,428	78,358	160,000	**391,786**
Total	**0**	**172.82**	**967,817**	**494,278**	**566,400**	**2,028,495**

4.2 DTPP COSTS

The total costs for the District Transport Perspective Plan come to NPR 2028.495 million as indicated in the table below.

Table 4.2.1DTPP costs (NPR '000)

Code	Conservation	Improvement	New construction	Total
66DR001	-	-	157,951	157,951
66DR002	-	-	344,440	344,440
66DR003	-	-	112,333	112,333
66DR004	-	-	261,008	261,008
66DR005	-	-	128,066	128,066
66DR006	-	-	34,445	34,445
66DR007	-	-	11,421	11,421
66DR008	-	-	48,476	48,476
66DR009	-	-	80,560	80,560
66DR010	-	-	181,787	181,787
66DR011	-	-	64,097	64,097
66DR012	-	-	87,201	87,201
66DR013	-	-	46,425	46,425
66DR014	-	-	31,412	31,412
66DR015	-	-	30,683	30,683
66DR016	-	-	16,404	16,404
66DR017	-	-	391,786	391,786
Total	**-**	**-**	**2,028,495**	**2,028,495**

5. RANKING

The ranking of the required interventions determines the order in which they will be carried out. This ranking is done separately for new constructions. Ranking is done according to the cost per person served, whereby the costs are the estimated costs of the previous chapter. For the calculation of the population served, use is made of the population data for the VDCs linked by the road concerned. This data is presented in **Annex 1**.

5.1 NEW CONSTRUCTION

For the roads proposed for new construction, ranking is also according to the cost per person served by the new road, according to DTMP Guideline. This ranking of roads will be updated each year in the ARMP based on the actual cost estimates for the year concerned. The resulting ranking is indicated in the table below.

Table 5.1.1 Ranking of new construction works (NPR '000)

Code	Length (km)	Total cost (NPR '000)	Population served	Cost/person (NPR)
66DR007	1.35	11,421	1,575	7,251
66DR012	10.31	87,201	7,116	12,254
66DR011	7.58	64,097	4,704	13,626
66DR016	1.94	16,404	1,143	14,351
66DR014	3.71	31,412	2,035	15,436
66DR013	5.49	46,425	2,150	21,593
66DR009	5.74	80,560	3,722	21,644
66DR006	4.07	34,445	1,489	23,133
66DR015	3.63	30,683	1,110	27,642
66DR005	10.41	128,066	4,571	28,017
66DR010	12.98	181,787	5,964	30,481
66DR008	5.73	48,476	1,235	39,252
66DR004	22.91	261,008	4,868	53,617
66DR017	27.40	391,786	5,294	74,006
66DR002	22.37	344,440	4,104	83,928
66DR003	8.55	112,333	1,057	106,275
66DR001	18.67	157,951	904	174,724

But, the ranking has also been done, according to the decision of DDC and DTICC as given table below.

Table 5.1.2 Ranking of new construction works (NRs. '000)

Code	Length (km)	Total cost (NPR '000)	Population served	Cost/person (NPR)
66DR017	27.40	391,786	5,294	74,006
66DR010	12.98	181,787	5,964	30,481
66DR012	10.31	87,201	7,116	12,254
66DR005	10.41	128,066	8,912	14,370
66DR009	5.74	80,560	4,785	16,836
66DR011	7.58	64,097	4,704	13,626
66DR003	8.55	112,333	3,155	35,605

Code	Length (km)	Total cost (NPR '000)	Population served	Cost/person (NPR)
66DR001	18.67	157,951	904	174,724
66DR007	1.35	11,421	1,575	7,251
66DR016	1.94	16,404	1,143	14,351
66DR014	3.71	31,412	2,035	15,436
66DR008	5.73	48,476	2,298	21,095
66DR013	5.49	46,425	2,150	21,593
66DR006	4.07	34,445	1,489	23,133
66DR015	3.63	30,683	1,110	27,642
66DR004	22.91	261,008	4,868	53,617
66DR002	22.37	344,440	4,104	83,928

6. DISTRICT TRANSPORT MASTER PLAN (DTMP)

Based upon the prioritized transport linkages and the projected financial plan, first five year District Transport Master Plan (DTMP) indicating the year-wise target has been prepared. Various categories of interventions such as Conservation, Improvement and New construction for roads have been prepared and presented in this report.

6.1 FIVE YEAR PROJECTED FINANCIAL RESOURCES

Major sources of funding to rural road network development are mainly the DDC development grant, DDC's and VDC's own resources, DoLIDAR support, GON's grant and support from other donor agencies. While preparing the financial plan, current available financial resources from various agencies and assuming 10% annual growth on this was considered and this is then projected for the next five years to prepare the first Five-year Financial Plan. The total district budget for the road sector is NPR 1231.216 million for the five-year period as presented in table 6.1.1.

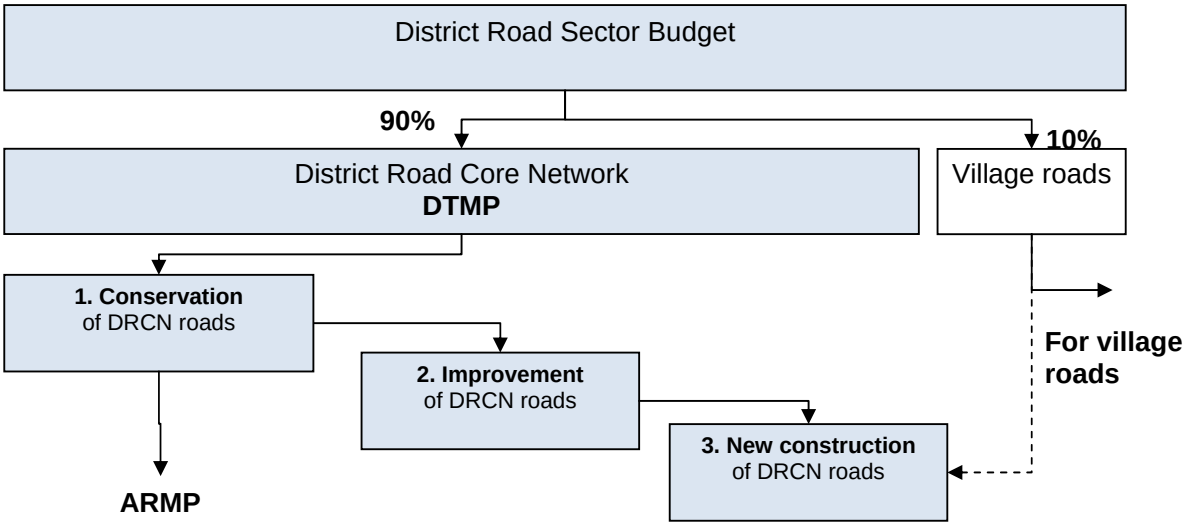
Table 6.1.1Estimated funding levels (roads) for next five years (in NPR '000)

Funding source	2070/71	2071/72	2072/73	2073/74	2074/75
RAP II	8,000	8,800	9,680	10,648	11,713
Local Agricultural Road Programme	13,000	14,300	15,730	17,303	19,033
RCIW	1,670	1,837	2,021	2,223	2,445
DRILIP	160,000	176,000	193,600	212,960	234,256
DDC Grant (40%)	5,360	5,896	6,486	7,134	7,848
Karnali Employment Programme(40%)	13,640	15,004	16,504	18,155	19,970
Total	**201,670**	**221,837**	**244,021**	**268,423**	**295,265**
Grand total	**1,231,216**				

6.2 BUDGET ALLOCATION

Distribution of the available district road sector budget is indicated in the figure below. Due to the few number of village roads, 90% of the total budget is reserved for the District Road Core Network. The remaining 10% is to be used by the DDC for the village roads. Alternatively, this 10% may be used for the new construction of DRCN roads where this is considered a priority by the district. The 90% of the district road sector budget for the DTMP is allocated to new construction.

Figure 5 District Road sector budget allocation



Based on this distribution of the estimated budget, the available annual budget for each intervention type and the resulting district road core network length by surface type can be calculated. The results are shown in the following table.

Table 6.2.1DTMP investment plan

Item			**Year**									
Fiscal year			2070/71		2071/72		2072/73		2073/74		2074/75	
Total budget			201,670		221,837		244,021		268,423		295,265	
Village roads			20,167		22,184		24,402		26,842		29,527	
Core road network budget (DTMP)			**181,503**		**199,653**		**219,619**		**241,580**		**265,739**	
Core network length (km)			**-**		**-**		**-**		**-**		**-**	
Blacktop (km)			-		-		-		-		-	
Gravel (km)			-		-		-		-		-	
Earthen (km)			-		-		-		-		-	
Conservation (NRs)			**-**		**-**		**-**		**-**		**-**	
Emergency			-		-		-		-		-	
Routine												
Recurrent (blacktop)												
Recurrent (gravel)												
Recurrent (earthen)												
Periodic (blacktop)			-		-		-		-		-	
Periodic (gravel)			-		-		-		-		-	
Construction	**Cost**	**GR**	**181,503**	**GR**	**199,653**	**GR**	**219,619**	**GR**	**241,580**	**GR**	**265,739**	**GR**
66DR007	11,421	1.35	11,421	1.35	-	-	-	-	-	-	-	-
66DR012	87,201	10.31	87,201	10.31	-	-	-	-	-	-	-	-
66DR011	64,097	7.58	64,097	7.58	-	-	-	-	-	-	-	-
Construction	**Cost**	**GR**	**181,503**	**GR**	**199,653**	**GR**	**219,619**	**GR**	**241,580**	**GR**	**265,739**	**GR**
66DR016												

	16,404	1.94	16,404	1.94	-	-	-	-	-	-	-	-
66DR014	31,412	3.71	2,380	0.28	29,032	3.43	-	-	-	-	-	-
66DR013	46,425	5.49		-	46,425	5.49	-	-	-	-	-	-
66DR009	80,560	5.74		-	80,560	5.74	-	-	-	-	-	-
66DR006	34,445	4.07		-	34,445	4.07	-	-	-	-	-	-
66DR015	30,683	3.63		-	9,191	1.09	21,492	2.54	-	-	-	-
66DR005	128,066	10.41		-		-	128,066	10.41	-	-	-	-
66DR010	181,787	12.98		-		-	70,061	5.00	111,726	7.98	-	-
66DR008	48,476	5.73		-		-		-	48,476	5.73	-	-
66DR004	261,008	22.91		-		-		-	81,378	7.14	179,630	15.77
66DR017	391,786	27.40		-		-		-		-	86,108	6.02
66DR002	344,440	22.37		-		-		-		-		-
66DR003	112,333	8.55		-		-		-		-		-
66DR001	157,951	18.67		-		-		-		-		-
Total new construction			**181,503**	**21.45**	**199,654**	**19.82**	**219,619**	**17.95**	**241,580**	**20.85**	**265,738**	**21.79**
Remaining budget			**0**		**-0**		**-0**		**0**		**0**	

6.3 DTMP OUTPUTS

Based on the investment plan presented above, all DRCN roads (101.86 km) will be constructed for the duration of the DTMP period and remaining 70.96 km of DRCN roads will be constructed in the next DTMP.

Table 6.3.1DTMP output

Conservation	Improvement gravel	Improvement blacktop	New construction
-	-	-	101.86

6.3.1 DTMP OUTCOME

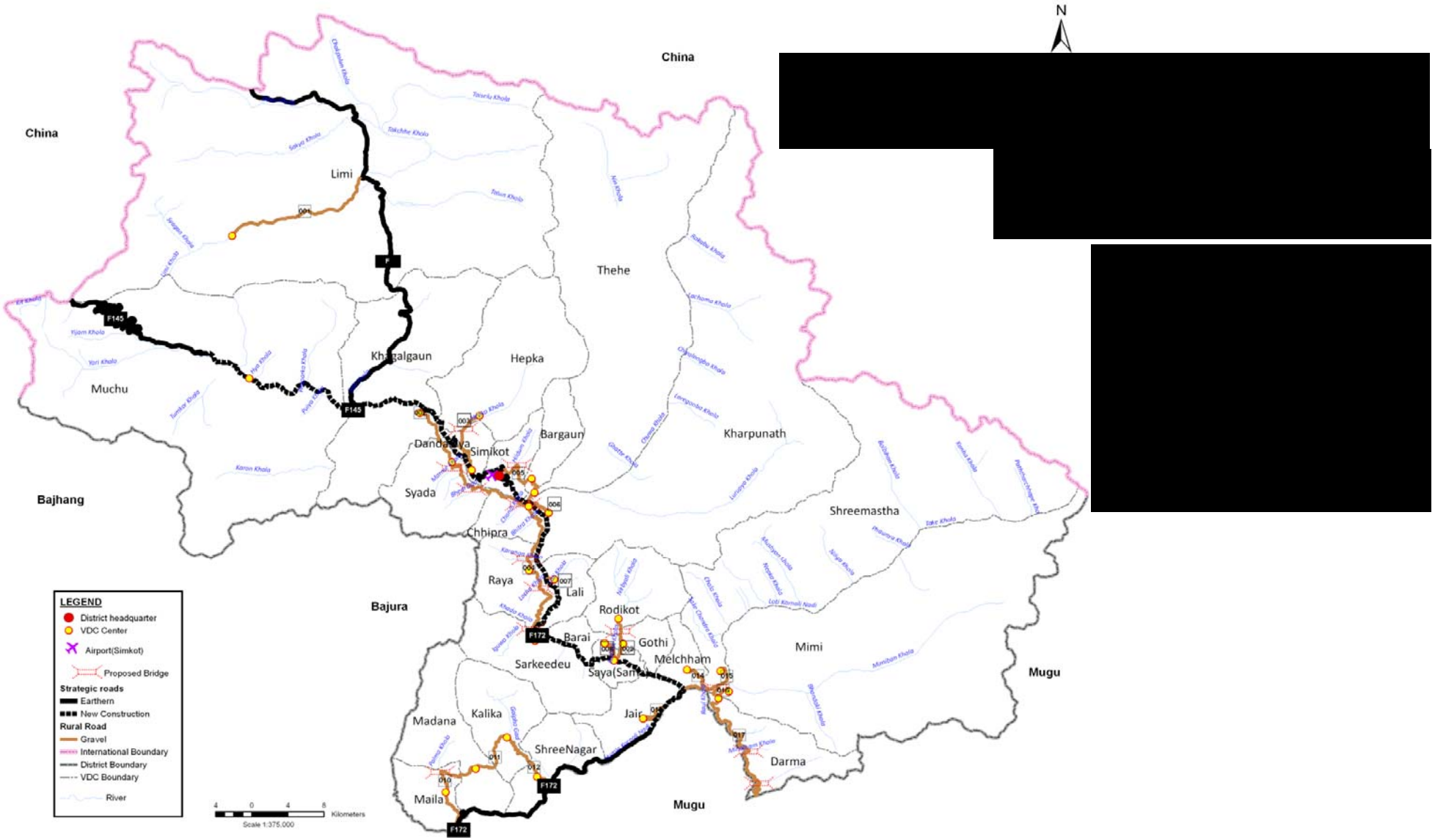
As a result of the activities planned in this DTMP, the percentage of all-weather DRCN roads at the end of this DTMP is increased by 0 to 101.86 km.

Table 6.3.2 Population with access to road network

	Direct access to SRN			No access to road			Fair-weather core roads			All-weather core roads		
	VDCs	Population	%	VDCs	Population	%	VDCs	Population	%	VDCs	Population	%
Start of DTMP	4	8,418	17%	27	49,933	100%	0	-	0%	0		0%
End of DTMP	4	8,418	17%	9	16,399	33%	0	-	0%	18	33,534	67%
Difference	-	-	0%	-18	-33,534	-67%	-	-	0%	18	33,534	67%

The number of VDC headquarters with access to the SRN or all-weather DRCN roads will increase from 0 to 18 and the district population with access to the SRN or all-weather DRCN roads will increase from 0% to 67%. The number of VDC headquarters with no access to DRCN roads will remain at 9, while the percentage of the district population with no access to DRCN roads will remain at 33%.

Figure 6 District Transport Master Plan (DTMP)



ANNEX 1 POPULATION SERVED

#	VDC/municipality	Population	66DR001	66DR002	66DR003	66DR004	66DR005	66DR006	66DR007	66DR008	66DR009	66DR010	66DR011	66DR012	66DR013	66DR014	66DR015	66DR016	66DR017	SRN
										X										
							X													
3	Chhipra	1,045		X		X														
4	Dandafaya	2,098			X															X
5	Darma	2,116																	X	
6	Gothi	1,111									X									
7	Hepka	1,057			X															
8	Jair	2,150													X					
9	Kalika	3,158											X	X						
10	Khagalgaun	1,023		X																
11	Kharpunath	1,489					X	X												
12	Lali	1,575							X											
13	Limi	904	X																	
14	Madana	1,546										X	X							
15	Maila	4,418										X								
16	Melchham	925														X			X	
17	Mimi	1,143																X	X	
18	Muchu	916																		X
19	Raya	1,902				X														
20	Rodikot	2,611									X									
21	Sarkeedeu	1,921				X														
22	Saya	1,063								X	X									X
23	Shree Nagar	3,958												X						
24	Shreemastha	1,110														X	X		X	
25	Simikot	4,341					X													X

#	VDC/municipality	Population	66DR001	66DR002	66DR003	66DR004	66DR005	66DR006	66DR007	66DR008	66DR009	66DR010	66DR011	66DR012	66DR013	66DR014	66DR015	66DR016	66DR017	SRN
26	Syada	2,036		X																
27	Thehe	2,344					X													
	Total population	**49,933**	904	4,104	3,155	4,868	8,912	1,489	1,575	2,298	4,785	5,964	4,704	7,116	2,150	2,035	1,110	1,143	5,294	8,418
	Total VDCs/municipalities	**27**	**1**	**3**	**2**	**3**	**4**	**1**	**1**	**2**	**3**	**2**	**2**	**2**	**1**	**2**	**1**	**1**	**4**	**4**

ANNEX 2 LOCATION OF PROPOSED INTERVENTIONS

Road code	Road Name	Length (km)	Start chainage (km) or X-coordinate	End chainage (km) or Y-coordinate	Proposed Chainage (km)	Total length of Bridge (m)

66DR001	Tankchhe-Halji Road	18.67	0+000	18+670		
66DR002	Chhipra-Syada-Khagalgaun Road	22.37	0+000	22+370	1+045,Chandi khola-12.0m,9+085,Bhedigad-10.0m,13+080,Marme Khola-15.0m,and 22+370,Karnali khola-60.0m	97
66DR003	Dandafaya-Hepka Road	8.55	0+000	8+550	6+006,Hepka khola-25.0m	25
66DR004	Chhipra-Raya-Sarkeedeu Road	22.91	0+000	22+910	9+380,karanga khola-15.0m,15+080,Locha khola-12.0m,21+024, Iquwa khola-15.0m	42
66DR005	Simkot-Bargaun-Thehe-Kharpunath Road	10.41	0+000	10+410	2+304,Hildom khola-25.0m	25
66DR006	Kharpunath VDC Link Road	4.07	0+000	4+070		
66DR007	Bokcheguda-Lali VDC Link Road	1.35	0+000	1+350		
66DR008	Sarkegad-Saya-Barai Road	5.73	0+000	5+730		
66DR009	Sarkegad-Gothi-Rodikot Road	5.74	0+000	5+740	3+810,Rodikot khola-20.0m	20
66DR010	Kawadi-Madana Road	12.98	0+000	12+980	7+817,Palma khola-45.0m	45
66DR011	Madana-Kalika Road	7.58	0+000	7+580		
66DR012	Galphagad-kalika Road	10.31	0+000	10+310		
66DR013	Jair VDC Link Road	5.49	0+000	5+490		
66DR014	Melchham VDC Link Road	3.71	0+000	3+710		
66DR015	Shreemastha VDC Link Road	3.63	0+000	3+630		
66DR016	Mimi VDC Link Road	1.94	0+000	1+940		
66DR017	Chankheli-Piplang-Sallisalla Road	27.40	0+000	27+400	5+004,Loti Karnali-60.0m,18+042,Minotham khola-15.0m,and23+705,Rauli khola-25.0m	100
Total		**172.82**			**0**	**354**

ANNEX 3 GIS FILE PROJECTION AND COORDINATE SYSTEM

GPS Setting

Grid: **Lat/Long hdd.ddd** and Datum **Indian Bangaladesh** and Unit in **metric** system have been considered in GPS during field survey. Garmin Etrex 30 GPS receiver was used in GPS field survey.

Defining the coordinate systems and reprojecting data in ArcGIS

We can define a coordinate system for data using the following options in ArcGIS using the Define Projection tool in the Data Management toolbox. If the data has a coordinate system definition, but it does not match the typical coordinate system used by an organization, we can reproject the data using the Project tool in the Data Management toolbox. We need to use the corresponding projection parameters while defining the coordinate system or reprojecting the data.

Projection and coordinate System used in GIS Shape file

- Projection type: Conformal (preserving shape)
- Projected coordinate system: Transverse Mercator
- Parameters of the coordinate system:
- *False_Easting: 500000*
- *False_Northing: 0*
- *Cental_Meridian: 81 for Western of Nepal*
- *Scale_Factor: 0.9999*
- *Latitude_Of_Origin: 0*
- *Spheroid: Everest 1830*
- Associated Geographic Coordinate System: *Everest-India and Nepal.prj* under *Asia*

Photo 01: Participants in the Orientation workshop in Humla District

Photo 02: Participants in the Final workshop in Humla District

Photo 03: Headquarter of Humla District,Simkot

Photo 04: Existing Main Trail of Humla District