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World Food Programme

## Trail and Community Infrastructure Mapping for Emergency Preparedness and Response in Kalikot District



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## ACKNOWLEDGEMENT

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## EXECUTIVE SUMMARY

Kalikot district is prone to multiple hazards such as rockfall, earthquakes, landslides, floods, heavy rainfall, and thunderbolts. To ensure the rapid emergency preparedness and response at the time of the disaster, the Trail and Community Infrastructure Mapping was conducted in Kalikot district from 20 July 2020 to 15 April 2021 with the aim to understand the data gaps, build the local capacity to fill in the data gaps, enrich the geo-spatial data, and reduce data gaps.

Based on the availability of the spatial data and information, nine municipalities of Kalikot district were prioritized to map trail and community infrastructure. As a result, Pachaljharana, Raskot, and Khandachakra were prioritized first, Subhakalika, Sanni Tribeni, and Palata were prioritized second, and Mahawai, Naraharinath and Tilagufa were prioritized third. In addition to it, five routes for data collection were identified. To build the local capacity, the orientation program and training was conducted in the district headquarter, Manma. The orientation program sensitized the local stakeholders on the importance of data preparedness for emergency response and the significance of emergency preparedness and disaster risk reduction. In total, 40 participants joined the orientation program with 11 (27%) female attendees and representatives of various municipalities of Kalikot district. A separate technical training was given to 19 local youths, four (21%) being female, to capacitate them on using OpenStreetMap, digital tools such as Global Positioning System device, and OSM Tracker. After the training, 15 trained mappers were deployed to the field who collected a total of 1,762 data points and mapped 518.45 km of trails. In addition to the field-level data collection, the 32,246 buildings and 1,311 km roads of the Kalikot district were mapped and validated remotely through Mapathon activities in which 15 volunteers, eight being female, contributed to identify buildings and roads. In addition to community infrastructure data, the hazard and access constraints data along the trail route were collected that includes 109 hazard locations (landslides, rockfall, and flooding) and 340 obstacles on the route.

The collected data were then compiled in a geodatabase to prepare the six thematic maps and a main map of the Kalikot district. The six thematic maps were Administrative Map, Community Infrastructure Map, Health, Education and WASH Facilities Map, Public Service and Business Facilities Map, Access Constraints and Hazard Map, and Accessibility and Emergency Logistic Facilities Map.

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## ABBREVIATIONS

BIPAD	:	Building Information Platform Against Disaster
CBS	:	Central Bureau of Statistics
CDO	:	Chief District Officer
DAO	:	District Administration Office
DCC	:	District Coordination Committee
DDMC	:	District Disaster Management Committee
DFAT	:	Department of Foreign Affairs and Trade
DRR	:	Disaster Risk Reduction
DRRM	:	Disaster Risk Reduction and Management
EPR	:	Emergency Preparedness and Response
EPRP	:	Emergency Preparedness and Response Project
GIS	:	Geographic Information System
GLOF	:	Glacial Lake Outburst Flood
GoN	:	Government of Nepal
GPS	:	Global Positioning System
JOSM	:	Java OpenStreetMap
MOHA	:	Ministry of Home Affairs
OSM	:	OpenStreetMap
SFDRR	:	Sendai Framework for Disaster Risk Reduction
SWOT	:	Strengths Weakness Opportunities and Threats
VDC	:	Village Development Committee
WFP	:	World Food Programme
WSM	:	Weighted Sum Method
YI-Lab	:	Youth Innovation Lab
YYP	:	Youth and Young Professionals

## PROJECT INFORMATION

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# CHAPTER 1 : INTRODUCTION

## 1.1 Background

The World Food Programme (WFP) is the world's largest humanitarian agency fighting hunger worldwide with its mission to end global hunger. It delivers food assistance in emergencies and works with communities to improve nutrition and build resilience. In 2017, WFP Nepal started the second phase of the emergency preparedness and capacity development initiative in close cooperation with the Ministry of Home Affairs (MOHA) under the 'Emergency Preparedness and Response Project (EPR - II)'. The gap analysis study was conducted as a part of this project in October 2017 that identified 11 districts in Nepal that lack data preparedness in terms of spatial records of transport network, major supply routes to hard-to-reach communities, accessibility, and are vulnerable to natural and non-natural hazards such as landslides, earthquakes, droughts, floods, epidemics and Glacial Lake Outburst Flood (GLOF). Those 11 districts are from Karnali province and Sudurpaschim province where preparedness activities such as trail and community infrastructure mapping, trail data collection, and access information are vital for emergency preparedness and response. Among the districts identified are Darchula, Bajhang, Bajura, and Doti located in Sudurpaschim province and Humla, Mugu, Dolpa, Jumla, Accham, Kalikot, and Jajarkot located in Karnali province.

In 2018, taking into consideration of findings from gap analysis, the pilot project was initiated in five municipalities of Jumla district. In 2019, the project was implemented in Humla and Mugu districts of Karnali province. Taking into account the lesson learnt from Trail and Community Infrastructure Mapping conducted in 2018 and 2019, WFP Nepal further scaled up the project in Bajhang and Bajura districts in Sudurpaschim province and Dolpa and Kalikot districts in Karnali province in 2020. Youth Innovation Lab (YI-Lab), being a technical implementation partner of WFP Nepal, executed the project for Dolpa and Kalikot districts of Nepal.

## 1.2 Objectives

The key objectives of the project are as follows:

- Gap Analysis: To identify the gaps in the availability of spatial information for preparedness to emergency response. Also, to identify the status of the municipality in terms of data gaps and conduct vulnerability analysis at the municipal level to prioritize municipality for data and information collection.
- Local capacity development: To sensitize and train local government and municipalities, community members, members of partner organizations, site engineers, and planners to use OpenStreetMap (OSM). Also, building their capacity on using geo-informatics technology, android applications, Global Positioning System (GPS) devices, laptop to systematically collect and manage field data to support Disaster Risk Reduction (DRR)/ Emergency Preparedness and Response (EPR).
- Identification of local trails: To identify the main logistic supply routes/trails and their alternatives, prioritize and assess the accessibility of the trails, collect data and information on access constraints, hazards, critical infrastructures, and community assets along the surveyed trails by deploying the local mappers.

· Addressing the data gap: To use OSM platform to document geo-referenced data like trails and other local infrastructure relevant to emergency preparedness and fill the data gaps of building footprints, tracks, and trails.

## 1.3 Project Area

### 1.3.1 District Profile

Kalikot district lies in the Karnali province and is 393 km to the west of Kathmandu, the capital city of Nepal. It covers a total area of 1,741 sq km and is surrounded by Jumla district in the East, Achham district in the West, Mugu and Bajura districts in the North, and Dailekh and Jajarkot districts in the South. Kalikot has three urban municipalities: Khandachakra Municipality, Raskot Municipality, and Tilagufa Municipality and six rural municipalities: Pachaljharana Rural Municipality, Sanni Triveni Rural Municipality, Narharinath Rural Municipality, Shubha Kalika Rural Municipality, Mahawai Rural Municipality, and Palata Rural Municipality.

The district lies in the middle mountain physiographic region ranging from an elevation of 738 m to 4,790 m above mean sea level. The district receives an average annual rainfall of 730 mm and the temperature varies from 18.6 °C in summer to 5.6 °C in winter. According to the National Census of 2011, the district has 23,013 households with a total population of 136,948 (Male 68,833 and Female 68,115). It is also one of the districts with the lowest HDI with a value of 0.347 for 2011 (GoN, 2014). Its average literacy rate as of 2011 is 58% with female literacy rate being 46.5% and male being 69.6% (CBS, 2014).

Karnali highway and Karnali corridor are the two major road networks in the district as shown in Figure 1. The Karnali highway connects the district with other parts of the country. The highway starts from Dahikhola of Shubhakalika Rural Municipality adjoining Dailekh district and links to Jumla district in Nagma of Tilagufa Municipality. Karnali Corridor starts from Khulalu in Naraharinath Rural Municipality and extends through Sanni Tribeni – Raskot – Pachaljharana and connects to Bajura district through Nuwaghar village in Pachaljharana Rural Municipality. The motorable track has been opened in this corridor, however, due to the absence of motorable bridges in different sections over the Karnali river, vehicular movement is often obstructed during the monsoon season. Local buses, motorbikes, tuktuk are the public transport to commute. Agriculture (including livestock and poultry) and cottage industries are the main economic activities of the district.

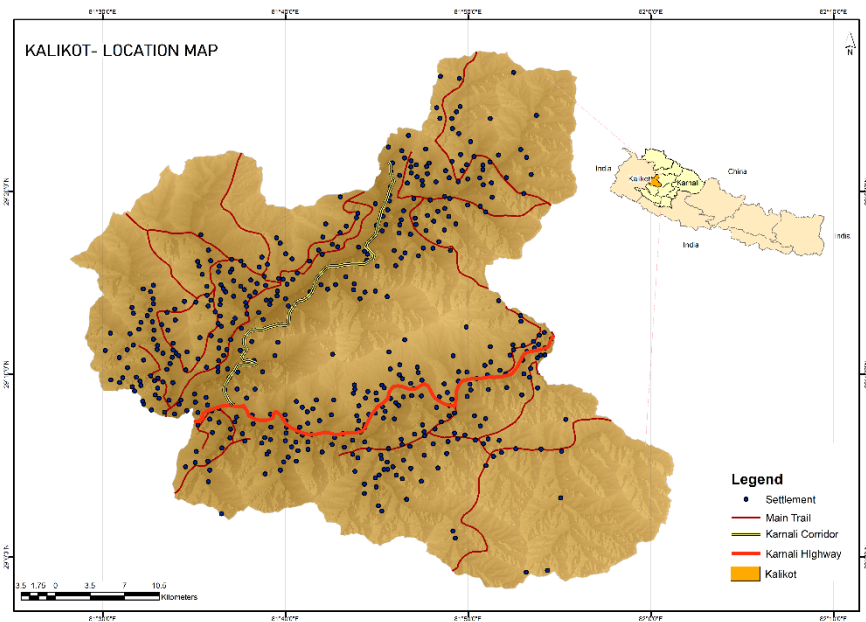


Figure 1: Map of Kalikot district showing major settlements and main trail routes. Data source: Survey Department

### 1.3.2 Disaster Profile

Kalikot district is one of the districts from the middle mountain region which is vulnerable to multiple hazards like rockfall, earthquakes, landslides, floods, heavy rainfall, and lightning. Upon reviewing the past 10 years (2011/1/1 to 2020/12/31) incidents data due to various disaster, 124 incidents were found to have occurred in the Kalikot district causing 90 people dead and an estimated 40 million in economic loss (BIPAD portal). The details is shown in *Table 1*. Landslide was the most frequently occurring hazard followed by fire, flood, thunderbolt and heavy rainfall. The record showed that the maximum number of human casualties was caused by landslide (63 people) followed by flood (13 people) and fire (8 people) (BIPAD portal). Likewise, Pachaljharana Municipality had the highest number of human casualties (48 people) followed by Naraharinath Municipality and Subha Kalika Municipality (BIPAD portal).

Table 1: Municipalities with the number of incidents (2011-01-01 to 2020-21-31)

Source: <https://bipadportal.gov.np>

S. N	Municipalities	Number of Incidents	Number of Deaths
1	Pachaljharana	75	48
2	Naraharinath	11	13
3	Subha Kalika	8	2
4	Raskot	7	4
5	Khandachakra	6	0
6	Tilagufa	6	11
7	Sanni Tribeni	4	3
8	Palata	4	1
9	Mahawai	3	8
	<b>Total</b>	<b>124</b>	<b>90</b>

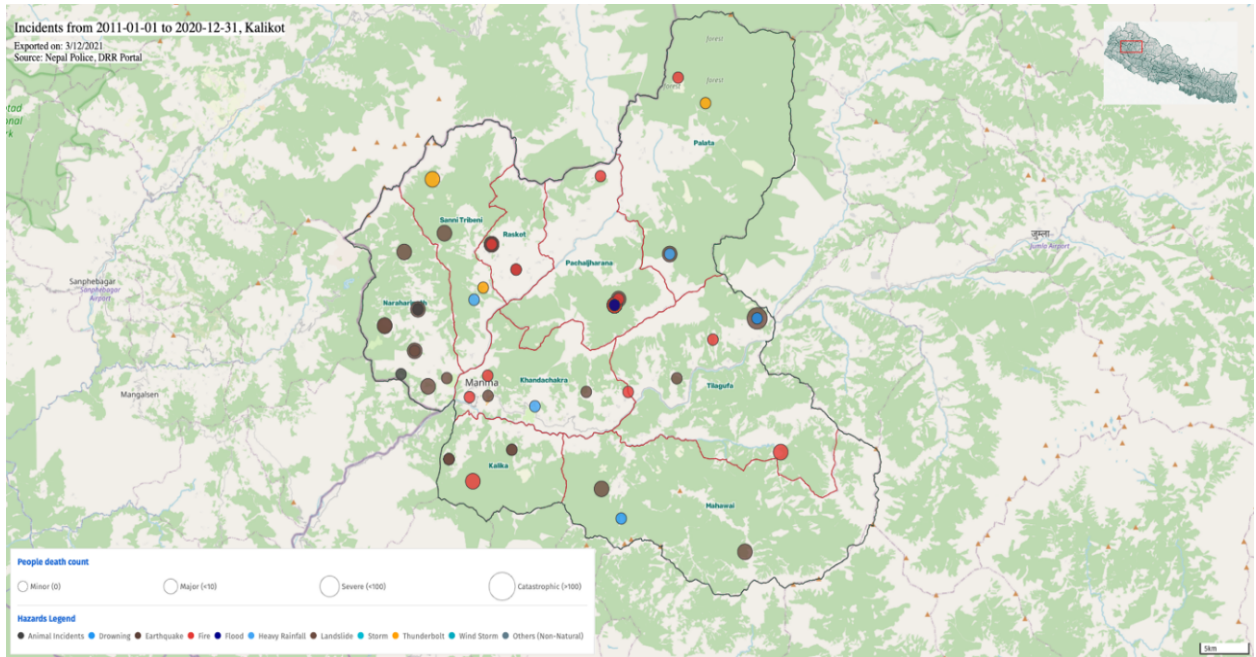


Figure 2: Kalikot district with the incidents recorded from 2011 to 2020. Map source: <https://bipadportal.gov.np>

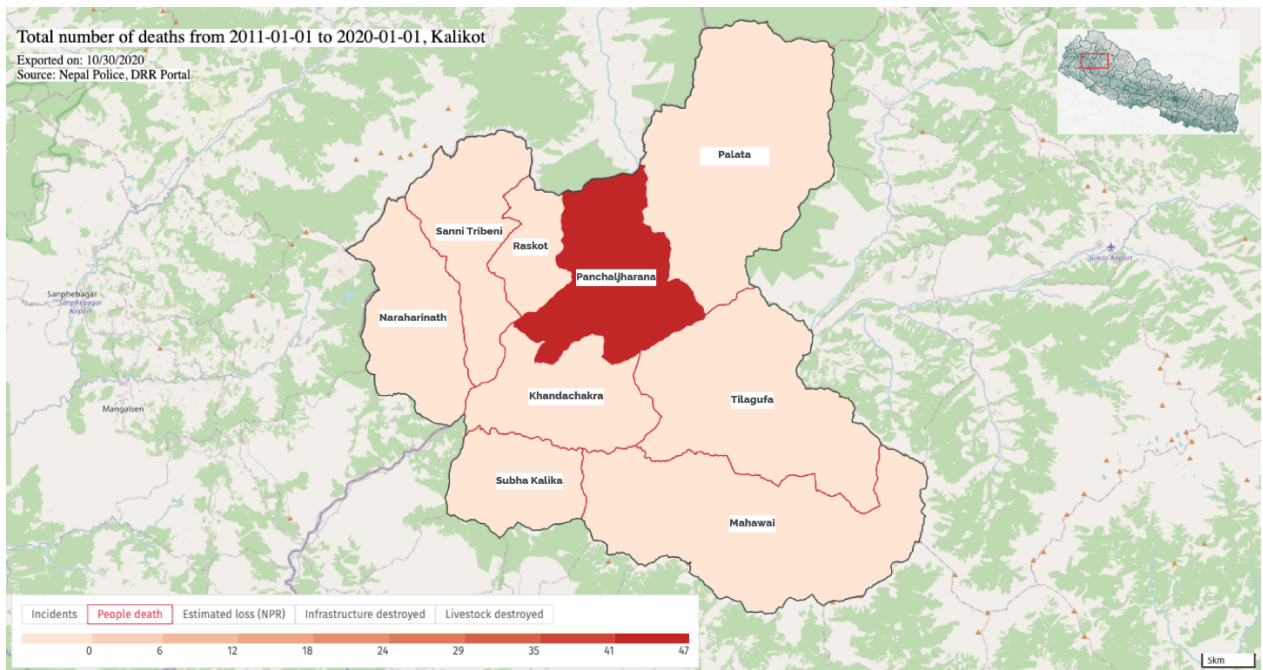


Figure 3 Map showing people death due to various natural and non-natural disasters in various municipalities of Kalikot district between 2011/01/01 to 2020/01/01. Source, <https://bipadportal.gov.np>

Figure 3: Choropleth map showing the people death due to disasters in various municipalities of Kalikot district from 2011 to 2020. Map source: <https://bipadportal.gov.np>

The trend of human death and disaster events of Kalikot district from 2011 to 2020 is shown in Figure 4. The trendline shows that there were just two disaster events recorded and no death occurred in 2011. The number of disaster events increased from 2012 to 2017 and also resulted in higher number of human casualties. Although a higher number of disaster events were recorded in the year 2018 and 2019, these incidents did not cause any

human deaths. The year 2020 saw maximum number of disaster events as well as human casualties. There was a sharp increase in the number of disaster events in Kalikot district after 2018 with 2020 being a year with maximum number of events.

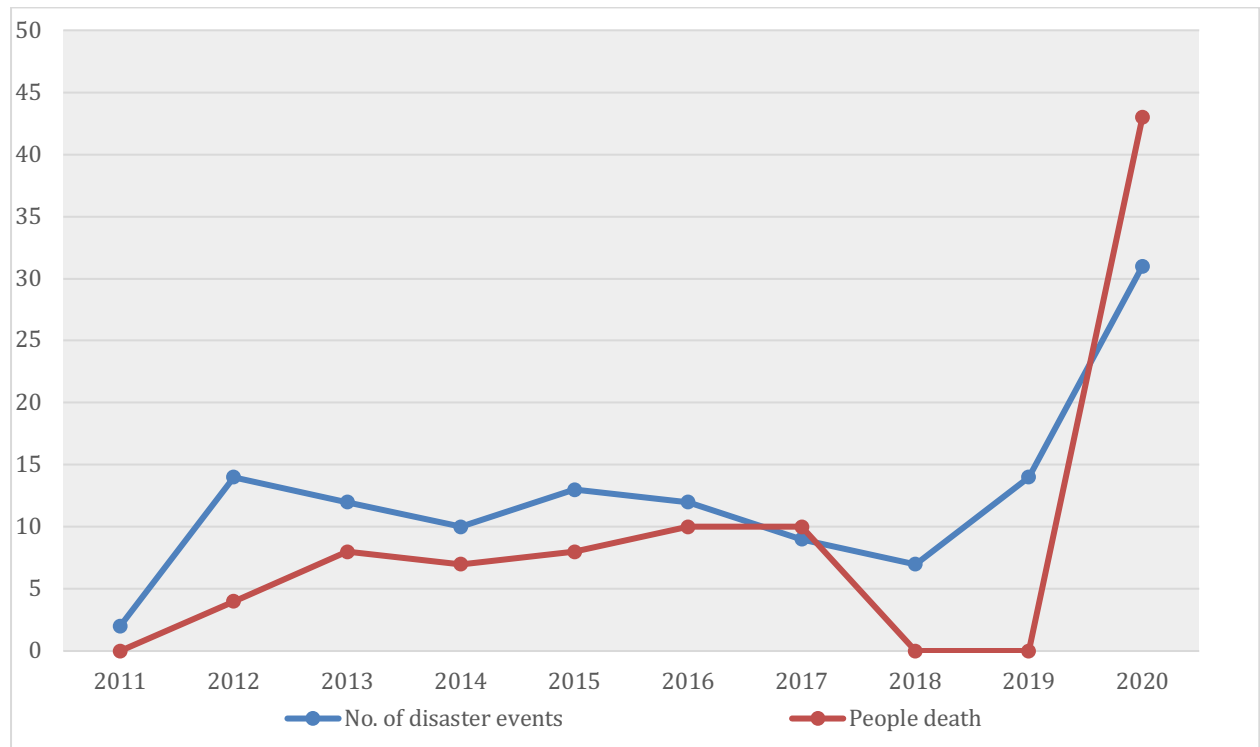


Figure 4: Trend of disaster events

Kalikot ranked 13 out of 77 districts in Nepal in terms of the highest risk to the earthquake as per the study conducted by Robinson et al., (2018). From 2000 to 2020, four earthquakes (with the most recent earthquake recorded in 2016) with epicenter within the Kalikot district were recorded (BIPAD portal). These earthquakes had magnitude of 4 ML to 4.3ML. Another study by Swirad et al., (2020) shows that Kalikot district (along with other few districts) is relatively more likely to experience landslides in the future compared to other districts in Nepal.

## CHAPTER 2 : LITERATURE REVIEW

Nepal is prone to a multitude of natural and non-natural hazard causing disaster. The country ranks 20<sup>th</sup> in the most multi-hazard prone country in the world as per global vulnerability ranking (UNDRR, 2019), 4<sup>th</sup> most vulnerable country to climate change, 11<sup>th</sup> to earthquake, and 30<sup>th</sup> in terms of its risk to flooding at global risk profile (MoHA, 2018). The disaster events recorded in Nepal from 1900 to 2005 showed that the highest number of events was recorded in the hilly areas (Aryal, 2012). Among the reported disasters, the top five disasters were fire, landslides, epidemics, flood, and storms. Landslide and flood that also create physical constraints in transportation and accessibility have the contribution of altogether 40% to the disaster records.

The impacts of disaster on critical infrastructures like roads, telecommunication, and electricity are highly visible. In 2014, when a major landslide struck Sindhupalchowk district houses and properties, and other infrastructures were destroyed. The Araniko Highway – one of Nepal’s major road connection to China – was also severely damaged, creating a major consequence in Nepal’s trade and mobility (Geest, 2015). Likewise, during the Gorkha earthquake in 2015, the roads in the remote mountain regions were blocked by landslide and avalanches, telephone lines were destroyed, and the power supply was cut off. Also due to lack data and information on trail, the response effort was delayed especially in remote areas of 14 affected districts. The World Disaster Report (2016) states that the infrastructure can be a deciding factor in whether or not the situation becomes a disaster.

Over time, the use of Geographic Information System or GIS tool for disaster management applications and decision making is increasing. Disasters are spatial in nature (Johari, 2018). GIS can be used to collect, analyze, visualize, and understand such geospatial nature of data. Spatial information help to identify the vulnerable population and determine the hotspots that need immediate assistance and examine the extent of the damage (Zevenbergen et al., (2014). The spatial information of vulnerable settlements and available infrastructures in GIS can help assess disaster risks, coverage and effectively plan disaster response activities before, during and after a disaster (Holser, 2016).

The application of geospatial data and tools has been emphasized in different national and international framework. The Sendai Framework for Disaster Risk Reduction (2015-2030) specifically highlights the use of space applications, including GIS to enhance measurement tools, data collection, data analyses and dissemination of data (ESCAP, 2018). Section 24(c) of SFDRR emphasizes the development and update of location-based disaster risk information, including risk maps, by using GIS. Similarly, section 24 (f) talks about the use of GIS and information technology to enhance measurement tools and the collection, analysis and dissemination of data. In line with the SFDRR, the importance of GIS and mapping is also underlined in Nepal’s Disaster Risk Reduction and Management Act, 2017. Section 7, Sub-Section 7.4 of National Policy for Disaster Risk Reduction (2018) highlights the importance of developing risk assessment and mapping system to identify vulnerable communities. Similarly, Sub-Section 7.8 of the same, pinpoints developing disaster information management system based on remote sensing system, GIS and open-source technology and making it easily available to the public and stakeholders. The Disaster Risk Reduction National Strategic Plan of Action (2018-2030) Priority Area 1: Understanding Disaster Risk also highlights the availability and use of open data and open-source technology for effective disaster preparedness and response. In line with this, the trail and community infrastructure mapping program was carried out that aimed at collecting the spatial data and map the elements that are vulnerable to

disaster risks like government and private buildings, historical and cultural heritages, settlements, shelters, schools, hospitals, water supply structures that ultimately support the timely and effective disaster preparedness and response activities.

The application and uses of geospatial data and tools have become widespread around the world. The uses of Remote Sensing technology and GIS have been well recognized during Hurricane Katrina at the United States in 2005 (National Research Council, 2007). Another great innovation in the field of data and information technology is crowdsourced mapping or open mapping. Open mapping was used widely to support relief efforts during the devastating earthquake of 2010 in Haiti (McMurren et al., 2017). In Nepal, about 8,000 national and international OpenStreetMap community members worked to create a detailed map of affected areas after the 2015 earthquake (Pudasaini, 2016). These maps were used to help inform and guide the work of national and international humanitarian aid workers (Pudasaini, 2016). According to Soden & Palen (2017), a significant challenge while conducting emergency response in Nepal earthquake 2015 was transporting relief materials to remote and hard to access areas where roads were either non-existent, or of poor quality, or impassible by landslide. As disaster managers and responders require timely and accurate information to communicate and carryout effective response action (World Vision), maps such as logistic maps, can help to understand the topology of the transportation network, conditions of roads and practicability, location and characteristics of critical infrastructures like airports and helipads. In all aspects of emergency management, geospatial data and tools have the potential to save lives, minimize distress and reduce long-term impacts by guiding the response actions and also reduce the costs of dealing with emergencies. Therefore, it is imperative to manage data and information to prepare, understand and strategize disaster response activities.

## CHAPTER 3 : PROJECT METHODOLOGY

For successful execution of this project, the key activities are reframed to capitalize the ongoing WFP emergency preparedness and response project to build a knowledge-based preparedness strategy and avoid information gaps by collecting key information on access, assets, location, and potential hazard along the identified main supply routes. The major activities that have been executed to achieve the key objective of this project are:

- 1) *Orientation and Sensitization Workshop*
- 2) *Capacity building*
- 3) *Field Data Collection*
- 4) *Data Processing and Visualization*
- 5) *Remote mapping and*
- 6) *Updating the OSM.*

All these implementation process and activities allowed to draw a road map towards developing a replicable cost-effective model that can be used and upscale to other districts that are not yet mapped properly.

### 3.1 Desk study

The literature review was carried out prior to conducting the gap analysis of Kalikot district. The availability of secondary data was reviewed and the appropriate methodological approach to undertake gap analysis was identified from the desk study. Apart from this, other relevant articles, journals, publications available in various platforms were studied to understand the significance of GIS tools and the application of geo-spatial data and information for effective emergency preparedness and response. The importance of open-source mapping and its use for informed decision making were also examined. Similarly, the SFDRR framework, DRRM Act, National Policy, Strategic Action plan, Local Level acts were reviewed and studied. The WFP's GAP analysis report and previous approach of project implementation methodologies, best practices, learnings, and challenges were also studied.

### 3.2 Coordination

The coordination mechanism within the Government level was facilitated from the WFP Country Office and Sub-office, Surkhet through Ministry of Home Affairs with the letter of support to DAO office. YI-Lab hired the local coordinator to facilitate for the coordination with DAO and local level governments in close consultation with DAO office. From the inception of GAP analysis to verification of collected data, the local coordinator worked closely with municipal authorities and DAO office whereas the YI-Lab's team worked closely with WFP country office in project management and to meet the deliverables. The approach of multiple stakeholder coordination taken by YI-Lab in implementation of this project is shown in the Figure 5.

### Coordination Diagram

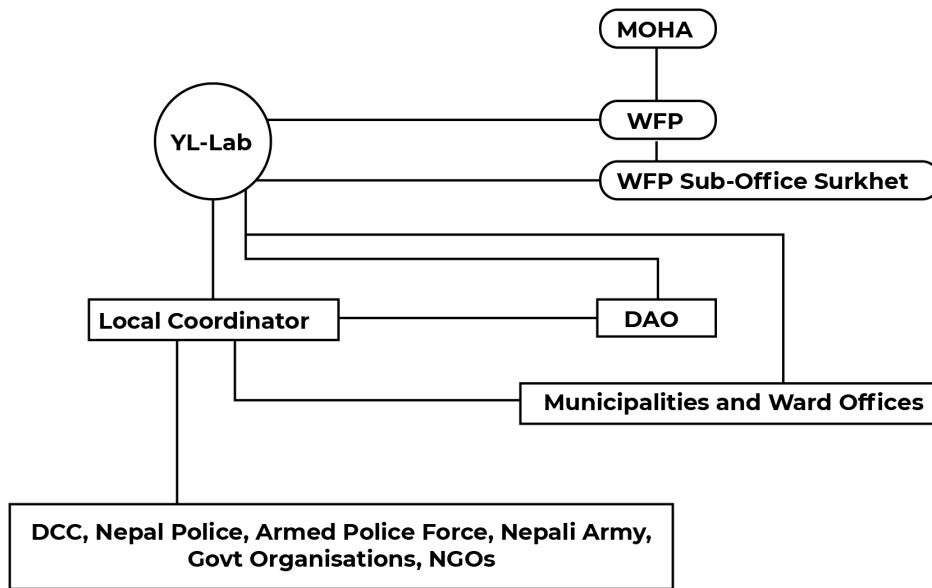


Figure 5: Flowchart showing the coordination approach

### 3.3 Gap Analysis

The understanding of the present scenario of the district was important before rolling out the project. However, the COVID-19 pandemic added additional challenge as the physical gathering of project officials at the local level was not possible. To fulfill this gap, a local resident of Manma—the headquarter of Kalikot district was hired as district coordinator to bridge gap between the project office and local scenario. The local coordinator assisted in the coordination with various stakeholders in local level, collection of datasets in given standard templete working closely with local authorities, and providing the real time scenario of changed context of situations. Data for gap analysis were collected from both primary and secondary sources. For primary data collection, key informant interviews were conducted. Municipal officials from nine municipalities were interviewed during the process. Secondary data was collected from different sources like governmental and non-government institutions, and research organizations.

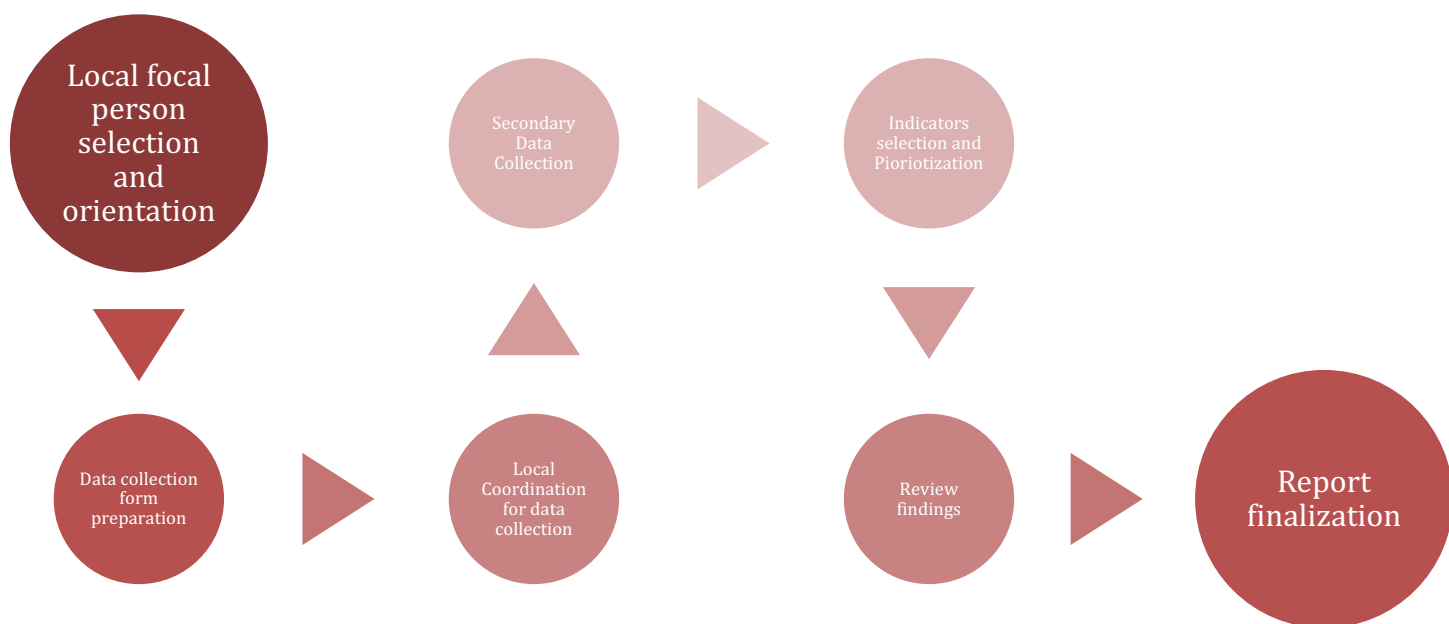


Figure 6: A schematic diagram showing a gap analysis methodology

Based on the availability of primary and secondary data and upon analyzing it, eight indicators (Table 2) covering six different domains: population, hazard vulnerability, availability of open spaces, poverty, remoteness, and availability of communication were selected. These indicators were used to identify and prioritize municipalities to map trail and community infrastructure.

Table 2 : Key indicators and source of data for gap analysis

S.N.	Indicator	Source
1	Population	CBS Nepal
2	Number of community open space	Survey Questionnaire
3	Remoteness index	WFP Nepal
4	Landslide risk index	Durham University
5	Number of incidents occurred (2011-01-01 to 2020-01-01)	BIPAD portal
6	Number of households without any communication facility	CBS
7	Prevalence of food poverty	WFP Nepal, World Bank
8	Poverty rate (economic poverty)	WFP Nepal, World Bank

After the analysis, nine municipalities were categorized into priority level I, II and III for trail and community infrastructure mapping. The main trail routes in each municipality were identified and confirmed by the local coordinator by interviewing with the residents, trekkers, and porters and with the local officials based in Manma. The gap analysis with the list of main trails under respective priority municipality were compiled in gap analysis report and given to the WFP Nepal. A list of trails was developed into five different routes based on information available from all municipalities during the gap analysis can be referred in Annex 8 b.

## **3.4 Orientation and Training at Kalikot district**

### **3.4.1 Orientation Program**

Sensitization about trail mapping to all the concerned authorities was crucial as they were key stakeholders that needed to take bigger responsibility of coordination in any disaster events. However, organizing the orientation program amidst COVID-19 pandemic was challenging. Taking consideration of WHO's and Government of Nepal's safety guideline, the orientation program was conducted in the leadership of DAO office in Manma. The objective was to sensitize local representatives, governments, security forces, community youth, and other relevant stakeholders on trail mapping and its importance.

The orientation program was held on 20 November 2020 in the District Coordination Committee (DCC) Hall in Manma. The program was attended by 40 participants out of which 11 were female (27%) and 29 were men (73%) and participants included Mayor, Deputy Mayor, Municipal Officers, Inspector of Nepal Police, Inspector from Armed Police Force, and various government officials based in the Kalikot district. The orientation program was chaired by the acting CDO Yuwaraj Guragain and Laxmi Bista from DCC was the chief guest of the program.

In the orientation program, the lead trainer sensitized participants about the project, approach, and mapping and highlighted the importance of the involving local youths and their contribution in mapping. Furthermore, the significance of data and its use for effective disaster planning, preparedness, and response were presented.

Speaking at the orientation program, Bijaya Bista, Deputy-Mayor of Khandachakra Municipality highlighted that the Kalikot district is vulnerable to a multitude of disasters like landslides, floods, and fires. She shared that, the unplanned extension of road networks added more vulnerabilities to the lives and livelihood of the people, this approach of data collection will be helpful in understanding and mapping constraints and hazards. She welcomed the initiatives on mapping and data collection and acknowledged that it would support for better decision-making in the future.

Similarly, the acting CDO, Yuwaraj Guragain highlighted the existing dependency of local officials on paper-based maps for navigation and the existing gaps in locations and resource mapping. He further stressed on the importance of mapping infrastructure for emergency response. The sensitization schedule and list of participants during the workshop can be found in *Annex (2) and Annex (3)* respectively.

### 3.4.2 Training Program

One of the key approach of this project was to capacitate the local stakeholders and to make them be independently competent in handling all the technical aspects of the project. In this aspect, the training was designed in bringing all key stakeholders like Armed police force, Nepal Police, government officials and local youths, who play a crucial role disaster preparedness and response. The aim of conducting technical training was to develop the ability of local youth to handle the GPS device and use the digital data collection tools such as OSM Tracker and get familiar with OSM platform and JOSM to map features from the field. Apart from handling devices and mapping platform, the participants were introduced to the participatory mapping exercises and the importance of mapping for disaster preparedness. The training was designed to be practical with hands-on sessions, reading excersices, and audio video to make it more impactful.

The sensitization workshop was followed by four days of technical training (20-23 November). There were in total, 19 participants including IT officers, representatives from eight municipalities except for Palata Rural Municipality, Nepal Police, Armed Police Force, and local youths. Out of 19, 4 were female (21%), 15 were Male (79%). The selection of youths were carried out based on their local knowledge of the place and willingness to contribute in data collection.

### 3.5 Data Collection

After the completion of training, 15 trained individuals (12 male and 3 female) divided into five different groups, were deployed to the field to collect and map trail and community infrastructures.

Depending upon the technical knowledge and skills acquired from the four-day technical training, the roles of each individual in the team were allocated. The field survey and data work collection started on 24<sup>th</sup> November and lasted till 6<sup>th</sup> December. The field team walked through each of the identified trail routes during the gap analysis and collected data on hazards and constraints along the routes covering all nine municipalities of the Kalikot district. Further, the data on community infrastructures like hospitals, government institutions, educational institutions, financial institutions, religious sites, open spaces, major settlements, public buildings, telecommunication networks, business centers, river crossings, and geographic features data were collected during the field survey. Along with data, the attributes related to features were kept in the field logbook. Geo-tagged images of each feature were captured as evidence and the attributes such as accessibility of trail and frequency of hazard and risk were collected through visual sense and local community knowledge and experience.

Each field team was provided with a GPS, a mobile phone with OSM Tracker, and a logbook to record the data. GPS was provided to keep track of latitude, longitude, and elevation of the trail and community infrastructure; OSM Tracker and an android app to keep a record of tracks and take photos of the objects along the trail; Logbook to keep the records of attributes/features of infrastructures, trails, and junctions. In addition, a solar-powered power bank and charging panel set were also provided to each team to charge their mobile phone and other equipment as needed. Other logistic items such as the battery, measuring tape, measuring rope (10m long), first aid kit, reflector jacket, medicines, trekking stick, sleeping bag, torchlight, and the ruler were provided to each team.

### 3.6 Data Processing, Validation, and Management

- **Data Compilation:** The data collected from field via GPS devices, OSM tracker, and well-maintained logbook was compiled. The logbook from all five teams was digitized, photo sorted and backedup. These data were used in the preparation of shapefiles of all the layers.
- **Geodatabase Preparation:** File geodatabase was prepared in Arc GIS to store data collected from GPS and OSM trackers. The attribute table of each layers - trail network, main trail, trail junction, river crossings, health amenities, public buildings, community space, business centers, constraints, hazards, financial institutions, utility infrastructures, settlements, education infrastructures, geographic features, religious places, landing zone, and others were standardized as per Terms of Reference (TOR). All photographs were kept in raster photo field of layer wherever asked by TOR.
- **Topology Checking of Routes:** The digitized data of trail in OSM was downloaded and worked in the Arc GIS environment. The topology of trail was checked in GIS, and layers of trail network and the main trail were prepared.
- **Map Creation:** The finalized geodatabase including datasets of surveyed trail, admin boundary, data of secondary sources and OSM datasets via remote mapping was used to prepare thematic maps and main map of the Kalikot district.

### 3.7 Data Visualization

*Map preparation using geodatabase:* The geodatabase of the Kalikot district was used to prepare the following thematic maps in A3 size:

- i. Administrative Map
- ii. Community Infrastructure Map
- iii. Health, Education and WASH Facilities Map
- iv. Public Service and Business Facilities Map
- v. Access Constraints and Hazard Map
- vi. Accessibility and Emergency Logistic Facilities Map

In addition, a digital copy of mapbook of each municipality is prepared to compile the six thematic maps and its associated information in columns and rows supporting texts and photographs.

### 3.8 Remote Mapping and Validation

The field data collected on the trail network, main trail, trail junction, river crossings, health amenities, public buildings, community space, business centers, constraints, hazards, financial institutions, utility infrastructures, settlements, education infrastructures, geographic features, religious places, landing zone, and others were digitized in OSM. In addition to the field data, the buildings, waterways, and roads of the Kalikot district were mapped and validated remotely.

During the validation process, missing buildings were added, shapes of buildings were modified as per the imagery, tags of the features were corrected and added in case of missing tags, errors were solved, connecting nodes of water ways and roads were corrected and the connected nodes of buildings with road were solved. Tools

and plugins of JOSM such as validation results, missing maps validator checks, conflicts and JOSM default were used to identify the errors and features to be corrected.

The Task of Kalikot district was created in HOTOSM, and 12 trained remote mappers and 3 validators were mobilized. Out of 15, seven mappers and one validator were female. Additional 24 contributors from various parts of the world were also involved in mapping the features like buildings, roads, and waterways in OSM. The link to the task of Kalikot is Task I: <https://tasks.hotosm.org/projects/9258>. The details on the remote mapping of the Kalikot district is shown in the Table 3.

*Table 3: Total mapped features in OSM*

Name	Task	Contributors	Total Edits	Buildings	Trails and Roads (km)
<b>Kalikot</b>	9258	46	36158	32246	1311

# CHAPTER 4 : RESULTS

## 4.1 Prioritization of Municipality

Based on the Weighted Sum Method (WSM) - a multi criteria decision analysis of eight selected indicators, the municipalities of Kalikot are categorized into three priority classes. A Pareto Optimal method of normalization (Kim & Weck, 2006) was used to the normalized the data of selected indicators before WSM. The analysis identified the composite index score to classify the municipalities with highest and lowest value for prioritization. A heat map with the composite index of the respective municipalities on the y-axis and the municipalities on the x-axis was developed to present the priority municipalities for trail mapping.

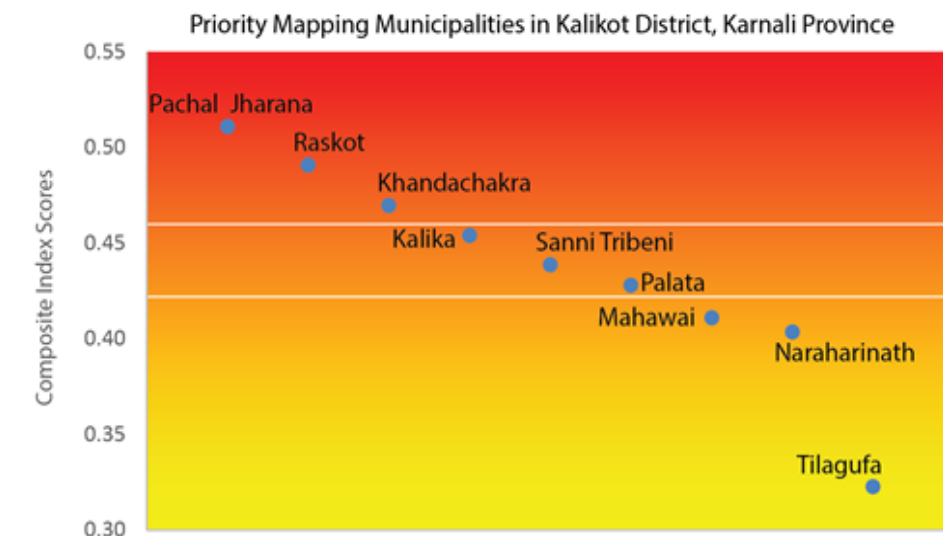


Figure 7: Heat map showing priority of municipalities for mapping

As shown in the Figure 8, Pachaljharana, Raskot, and Khandachakra fall under Priority I, SubhaKalika, Sanni Tribeni, and Palata fall under Priority II, and Mahawai, Naraharinath and Tilagufa fall under Priority III.

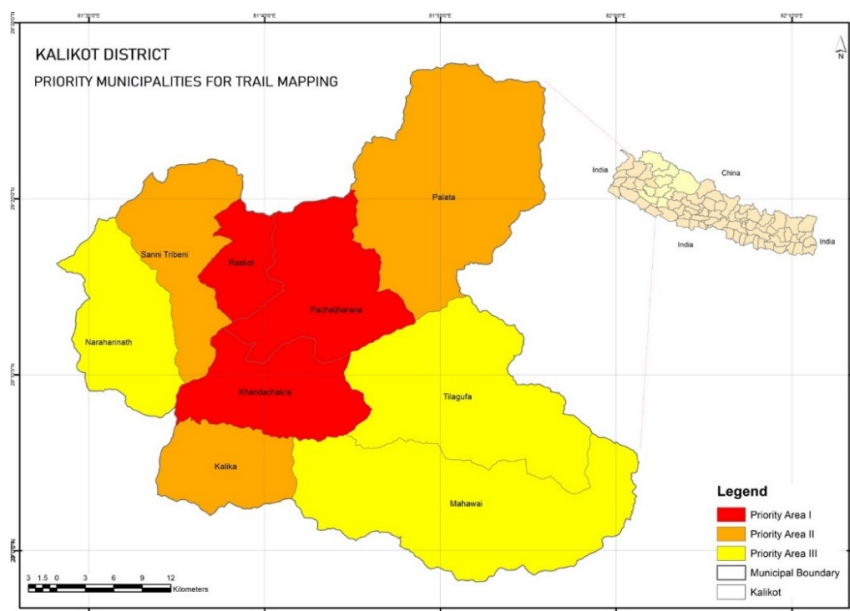


Figure 8: Priority Municipalities for Trail Mapping

## 4.2 Prioritization of trails

Based on the interviews along with several consultations, cross-check, and validation with the local municipal officials as well as travel guides, businessperson, local porters, and communities, the five main trail routes and route plans for the Kalikot district were identified. The five main trail routes of the Kalikot district are shown below.

Table 4: Major routes, municipality covered and estimated distance surveyed

S.N	Route Name	Municipality Covered	Estimated Distance (Km)
1	Manma – Thamkot,	Khadachakra and	7.6
	Tesrobazar – Dadha Bada,	Subhakalika	8.4
	Sahibada – Chauki,		11.5
	Manma – Badalkot,		14.1
	Hulma- Dahasera		45.48
2	Tilagufa-Nagma,	Tilagufa and Mahawai	16.12
	Karnali Highway – Okkarbhitta,		15.35
	Karnali Highway to Ratada		5.32
	Pipalchowk to Tilagufa		37.92
3	Khulalu to Ujyal,	Narharinat and Sanni Tribeni	66.13
	Shantighat to Mathillo Mumra,		28.37
	Shantighat to Tholma		9.65
4	Tholma to Thripu,	Panchaljarna and Raskot	32.7
	Bhatadi to Thripu,		26.17
	Tholma – Rana,		13.46
	RCP Bajar to Hipkot,		12.61
	Basantapur to Tamti		9.03
5	Thirpu – Jaafe,	Palata and Pachaljarna	32.75
	Thirpu – Gotichaur Basti		26.17

## 4.3 Key Observation

### 4.3.1 Accessibility and Access to Infrastructure

Kalikot district is connected by two major roads. First is Karnali Highway with its starting point in Dahikhola, Subhakalika Rural Municipality, and that passes through the district headquarter Manma and touches Jumla district. Karnali highway is the blacktopped road with the accessibility through the years.

Second is Karnali Corridor alongside the Karnali River that stretches from Khulalu, Naraharinath Rural Municipality and extends up to Bajura district through Sanni Tribeni Rural Municipality, Raskot Municipality and Pachaljarna Rural Municipality. The corridor is still under construction and no-section being blacktopped as of March 2021. A motorable bridge over Karnali river is underconstruction in Naraharinath Rural Municipality. The bailey bridges are available in Raigil, Sannitribeni and Fugaad of Raskot municipality. This bridge requires a proper maintenance almost every monsoon and hence, might affect the accessibility. However, the replacement of existing bailey bridge with a motorable bridge is ongoing in many sections of Karnali corridor.

The transportation facilities were found poor in Kalikot district. Motorbike is the means of transportation within and between the municipalities and district headquarter. Mostly the municipal officials use moterbike to commute, while local people travel on foot within and between municipalities. Jeep is less common in the Kalikot district and is seen only in the area where road accessible. *'Tuktuk'* is also common in the municipality but only in the highway. There are also local buses that runs only in the highway.

### 4.3.2 Community infrastructures

During the field survey, the number of geo-tagged data on critical infrastructures were collected. In total, 1,042 data including 222 educational institutions, 37 financial institutions, 96 health facilities, 163 public buildings, 57 community spaces, 38 business centers, 104 religious places, 96 river crossings, 226 utility infrastructures, and three emergency logistics/ landing zones were collected and mapped. There is a district hospital located in Manma. People commute to district hospital on foot and by buses. Locals, especially living in the remote areas travel up to highway on foot and then take buses to reach to the hospital. There is sub-health post located in each ward alongside of ward office. Some health post also consists of birthing centers. The health posts have maximum three staff while the health post with the birthing centers consists of up to 11 staff. There are very limited open spaces available around and nearby health posts, which makes it difficult to land helicopters in case of emergencies.

There are three different schools currently available in the Kalikot district: elementary schools, secondary schools and colleges. Elementary schools are single-storied with zinc sheet roofing, while the secondary schools and colleges are multiple-storied. Elementary schools have small playgrounds while secondary schools and colleges have a big ground that can be used as landing zones for helicopters during a time of disaster. These schools lie within the walking distance to the nearest settlements.

The main market center of Kalikot district is located in Manma. Within the district, the market centers is available in each municipality. Khandachakra Municipality consists of maximum number of markets including Manma bazar, Serabada bazar, Molfa bazar, Hulma bazar, and Jite bazar followed by Tilagufa Municipality with Gela bazar, Nagma bazar and Thinke bazar. The main markets available in other municipalities are Subhakalika Municipality - Sukatiya bazar; Mahawai Municipality - Paadamghat; Naraharinath Rural Municipality - Ragada

bazar; Pachaljharana Rural Municipality - Jarkot bazar; Palata Rural Municipality - Thirpu bazar and Raduneta bazar; Raskot Municipality - RCP bazar and Shantighat bazar; Sanni Tribeni Rural Municipality - Mehalmudi bazar and Raigil bazar.

Kalikot district did not have individual tap in each household instead water was supplied via public taps. The settlements with high numbers of households had a greater number of public taps and water distribution tanks and vice-versa. The drinking water facilities were in adequate condition; including 131 surveyed public taps and 23 water distribution tanks. Toilet and drinking water facilities were found in all surveyed schools. The details on municipality-wise WASH facilities are shown in the *Annex 12.12*. Mahawai Rural municipality does not have any financial institution. People have to travel to Manma for banking-related work. The public or government buildings are well equipped with equipment like computers, solar electric power, as well as internet access. However, many government buildings were found to operate through rental houses and have a high chance of shifting the location in the near future.

### **4.3.3 Hazard and Access Constraints**

Landslide, rockfall, flood, and rockslide were identified as the prominent hazards in Kalikot districts. In total, 109 hazards were mapped along the surveyed trail. Similarly, stream crossing, narrow way, river without bridge, steep slope, rocky and boulder way, slippery way, log crossing, vegetation barriers, water line overflow are identified as access constraints. In total, 339 access constraints are mapped along the surveyed trail. The field data collection team was oriented to record the data of hazard and constraints by determining the risk level (high, moderate and low) followed by occurrences of disaster (frequently, very frequently, occasionally and sometimes) and the status of the location for crossing the section (passable with caution, passable with minor rehabilitation, passable with major rehabilitation).

## 4.4 Synopsis of Field Survey

The field survey in the prioritized municipality of Kalikot shows that a total of 518.45 km trail mapped by 15 surveyors in a span of 12 days. The survey team collected a total of 1,762 data points with attributes that includes the location of critical access infrastructure, community assets, health, education, government and non-government offices, location of hazards and obstacles. On the other hand, 15 digital volunteers have contributed to digitize the 32246 building footprints, updated roads and waterways.

### Infographics showing key datasets of Kalikot

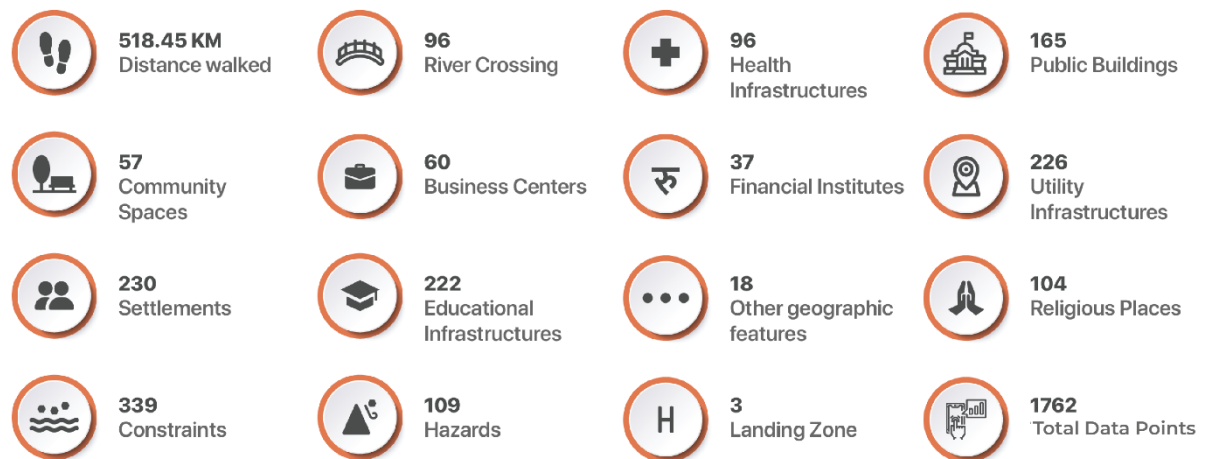


Figure 9: Key datasets of Kalikot district

#### 4.4.1 Municipality level Outputs

##### 4.4.1.1 Khandachakra Municipality

Khandachakra Municipality with an area of 133.29 sq km is the headquarters of Kalikot district surrounded by Tilagufa Municipality in the east, Karnali river in the west, Pachaljharana Rural Municipality in the north and Subhakalika Rural Municipality in the south. The municipality office is based in Manma. Being a district headquarters and connected to Karnali highway, the municipality is accessible throughout the year. According to CBS 2011, the total population and household number of the Khadachakra Municipality is 20,288 (Male: 10,334 and Female: 9,954) and 3,612 respectively. The major market centers are Manma bazar, Serabada bazar, Molfa bazar, Hulma bazar, and Jite bazar.

During the survey, the team noted scattered settlement throughout the municipality. Most people of the municipality traveled to India for employment or were dependent on agriculture for livelihood. People used motorbikebikes and other vehicles to commute to locations having access to motorable roads.

As one of the hydropower station was damaged during the landslide in July 2020, the municipality had only four hours of electricity supply. This also limited the office timing in the municipality from 11 am to 3 pm for essential works that require electricity.

Landslide is the major hazard of the Khadachakra Municipality. Nine landslide hazards were identified in the trails of Khandachakra municipality, out of which eight locations of hazards were passable with caution, and one location requires minor rehabilitation for safer access. A total of 48 constraints were identified in the trails of Khandachakra municipality. Apart from landslides, the trails in Khandachakra municipality were filled with constraints such as narrow width, rocky way, stream crossings, vegetation barriers and other obstacles. Out of identified constraints locations 25% required rehabilitation work. Steep slopes and slippery boulders further added challenges to the survey.

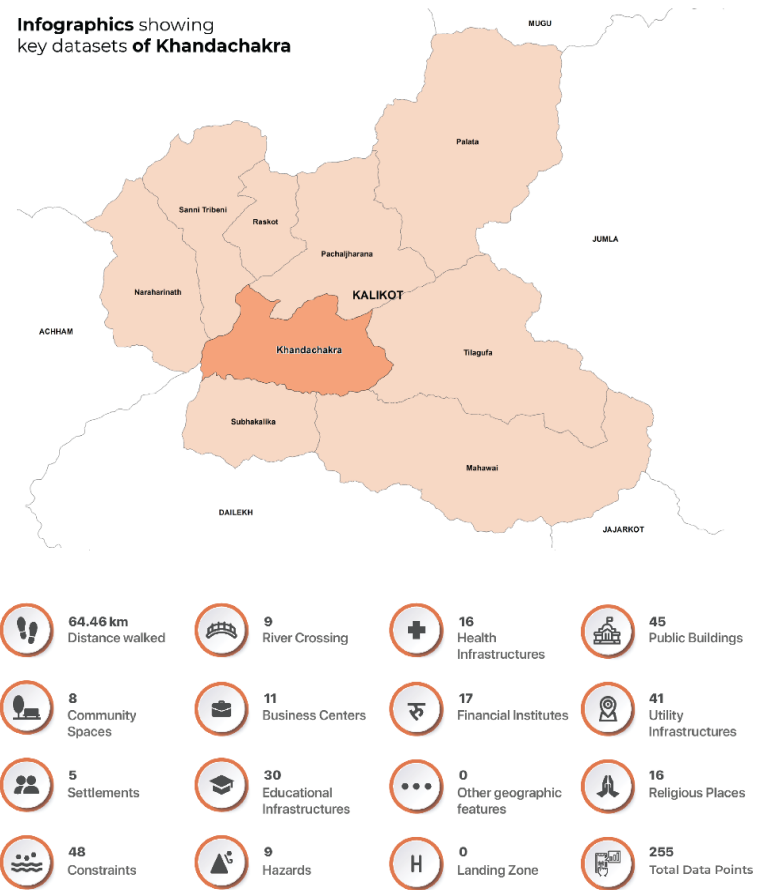


Figure 10: Key datasets of Khandachakra Municipality

#### 4.4.1.2 Shubhakalika Rural Municipality

Shubhakalika Rural Municipality with an area of 97.12 sq km is surrounded by Mahawai Rural Municipality in the east, Dailekh district in the south and west, and Khadachakra Municipality in the north. Dahikhola, the starting point of the Karnali highway in Kalikot district, lies in Shubhakalika Rural Municipality. The rural municipality office is based in Sukatiya. According to CBS 2011, the total population and household number of Shubhakalika Rural Municipality is 14,080 (Male: 7,026 and Female: 7,054) and 2,458 respectively.

The survey team carried out the field survey of the trails and infrastructures in the municipality. They started out from Ward 7 of the municipality. The survey team found dense settlement in Ward 3 and sparse settlement in rest of the areas. The major market center is Sukatiya bazar.

Certain sections in the trails have been recently dugged by local people. In most areas of the municipality, motorable road is not available. Apart from the area around Karnali Highway, the other region in this municipality is difficult to reach. Most of the trail roads were meandering, due to which longer distances had to be covered even to reach nearby places.

Landslide is the major hazard of Subhakalika Rural Municipality. A landslide incident occurred in 2020 however no settlement or infrastructure was affected. 12 landslide hazards were identified in the trails of Subhakalika Rural Municipality. Majority of trail sections through the landslides were passable with caution. However, there were two landslide locations that required minor rehabilitation for accessibility. A total of 81 constraints were identified in the trails of Subhakalika, 70% of these constraints in the trail were passable with caution, 19% were passable with minor rehabilitation and 11% needed major rehabilitations.

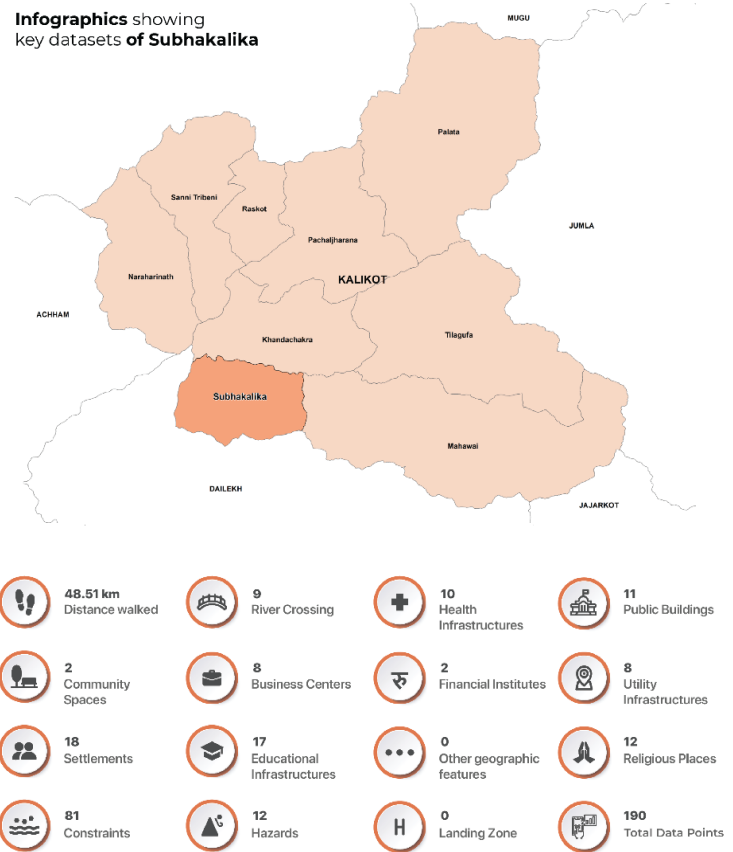


Figure 11: Key datasets of Shubhakalika Rural Municipality

#### 4.4.1.3 Mahawai Rural Municipality

Mahawai Rural Municipality with an area of 321.6 sq km is surrounded by Jumla in the north-east, Subha Kalika Rural Municipality in the west, Tilagufa Municipality in the north, Jajarkot district in the south-east and Dailekh district in the south-west. According to CBS 2011, the total population and household number of the Mahawai Rural Municipality is 8,323 (Male: 4,195 and Female: 4,128) and 1,447 respectively.

The rural municipality office is based in Paadamghat. The major market center is Paadamghat bazar, Pipalchowk and Odanaku. Most of the areas of Mahawai is covered by forest and barren land.

The survey team’s initial assessment found that the settlement in the Pipalchowk was congested in a small area. There were about 25-30 houses in about three parallel rows. There was just 4 hrs of electricity supply in the municipality. Most people used small solar powered lights for household use. People in the municipality depend on agriculture or go to neighbouring municipalities/ districts for livelihood.

Most of the roads in the municipality were typical trails with exceptions of some under construction/ recently opened track roads. The municipality is not accessible to motorable road, however, can be accessed via motorbike. Bailey bridge and suspension bridge are available over Tila river.

Landslide is identified as the major hazard along the trails in Mahawai Rural Municipality. Out of 15 identified landslides locations, four were passable with caution, nine locations were passable with minor rehabilitation and two locations needed major rehabilitation for accessibility. A total of 23 locations of access constraints were identified in the trails, narrow trail width is identified as the major access constraints after the landslides, followed by rocky/boulder way and slippery section. Although 90% of these constraints were passable with cautions, some narrow width requires minor rehabilitation for safe accessibility. Some log bridges required replacement for safer access.

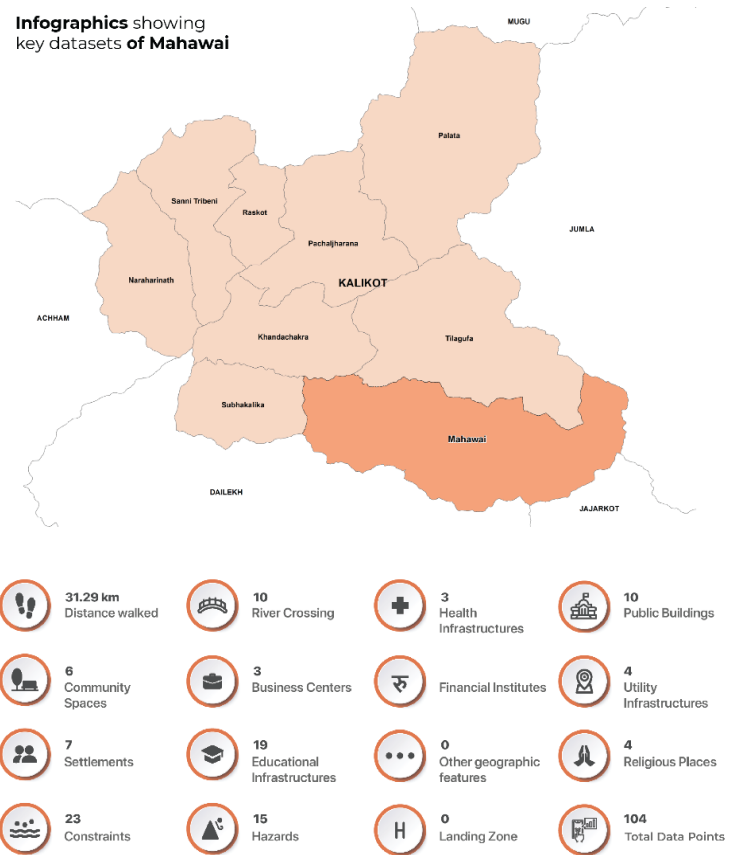


Figure 12: Key datasets of Mahawai Rural Municipality

#### 4.4.1.4 Naraharinath Rural Municipality

Naraharinath Rural Municipality is surrounded by Saani Tribeni Rural Municipality in the east, Achham district in the west, Bajura district in the north and Dailekh district in the south. The total area of the municipality is 143.6 sq km. According to the CBS 2011, the total population and household number of the Naraharinath Rural Municipality is 21,366 (Male: 10,603 and Female: 10,763) and 3,585 respectively. The rural municipality office is based in Kumalgaun.

The survey team walked through the trails to collect the data on critical infrastructures and trails. The major market center is Ragada bazar. Like in most municipalities in Kalikot, people in this municipality have agriculture as the main occupation along with cattle rearing. A helipad area is available and an airport in Sotargaun which is within one hour walking distance from Kumalgaun is under construction.

Karnali corridor starts from Khulalu of Naraharinath municipality. At present, the municipality headquarter is not connected to motorable roads. Bridge is under construction over Karnali river in Khalalu, which will provide access throughout the year.

Landslide and Rockfall are the major hazard of the Naraharinath Rural Municipality. In the monsoon of 2020, a landslide incident damaged about six schools and a ward office of the municipality. The same landslide had also killed seven members of Ward 7. During the field survey, 25 landslides and one rockfall hazards were identified as major hazards along the surveyed trails in Naraharinath Rural Municipality. At four locations in the trail, the landslides were passable with caution. At 13 locations, the landslides were passable with minor rehabilitation and in nine location, the trail required major rehabilitations for accessibility. A total of 44 constraints were identified in the trails of Naraharinath Rural Municipality. Constraints such as narrow width, rocky way, stream crossings were identified as major constraints, 68.18% of these constraints in the trail were passable with caution and 31.81% were passable with minor rehabilitations. Apart from major hazard and constraints, the critical infrastructure such as suspended bridge at Ragada needed substantial maintenance and all log bridge requires replacement almost every year as they get affected during monsoon.

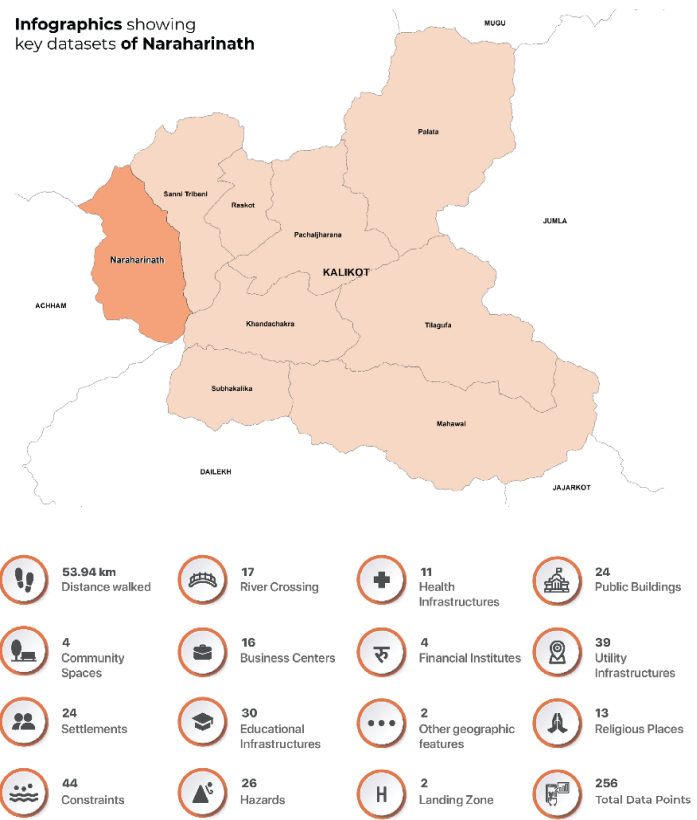


Figure 13: Key datasets of Naraharinath Rural Municipality

#### 4.4.1.5 Pachaljharana Rural Municipality

Pachaljharana Rural Municipality is surrounded by Palata Rural Municipality in the north-east, Tilagufa Municipality in the south-east, Raskot Municipality in the west, Bajura district in the north and Khandachakra Municipality in the south. The total area of the municipality is 166.64 sq km. According to the CBS 2011, the total population and household number of the Rural Municipality is 12,343 (Male: 6,260 and Female: 6,083) and 2002 respectively. The major market center is Jarkot bazar.

The two survey teams were deployed separately explored all the wards in the municipality to collect data on trails and infrastructures. The rural municipality office is based in Jarkot and had 24 hrs electricity supply. The Karnali corridor passes through Pachaljharana reaching to Bajura district. Being underconstruction, the corridor has limited access to transportation. Tractor and motorbike run throughout the year while jeep runs only in a dry or winter season. There are mostly trail roads and construction of motorable roads within the municipality was a common sight during the field visit.

Landslide is the major hazard of the Rural Municipality. Three landslides were identified along the trails of Pachaljharana Rural Municipality. All the landslides were identified as frequently occurring hazard and considered as one of the risky section of the Bhatadi-Thirphu trail. All the hazard locations requires major rehabilitation for safe access. A total of 19 constraints were identified in the trails of Pachaljharana Rural Municipality. 84.21% of these constraints in the trail were passable with caution, 10.52% were passable with minor rehabilitations and 5.26% were passable with major rehabilitations. Followed by Landslides, narrow width, rocky way and stream crossing were the other major constraints in the trails. The location of major rehabilitation requires construction of trail bridge on stream that cannot be passable during monsoon.

Infographics showing key datasets of Pachaljharana

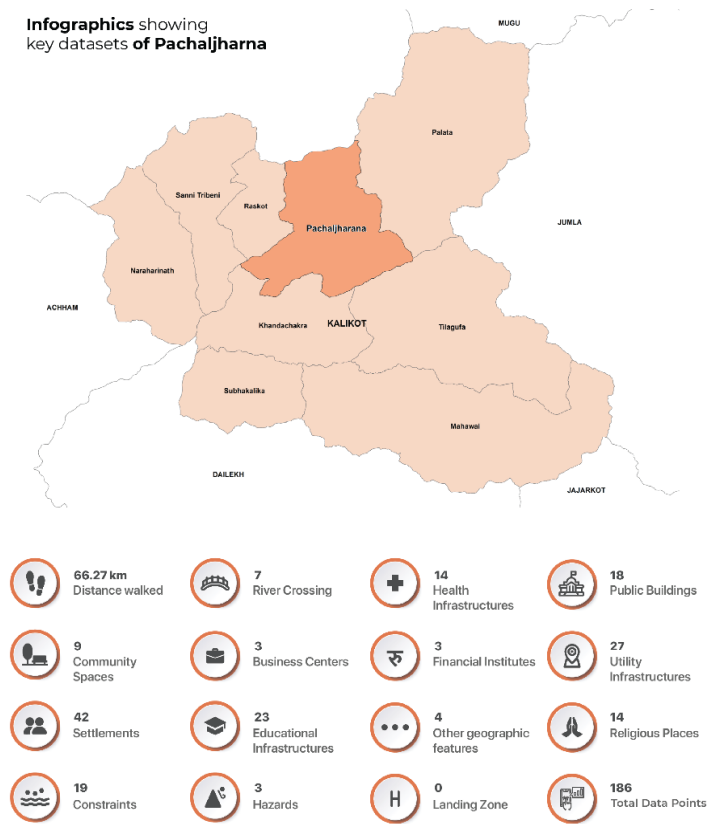


Figure 14 : Key datasets of Pachaljharana Rural Municipality

#### 4.4.1.6 Palata Rural Municipality

Palata Rural Municipality is surrounded by Jumla district in the east, Bajura district in the west, Mugu district in the north and Tilagufa Municipality in the south-east and Pachaljharana Rural Municipality in the south-west. The total area of the municipality is 133.29 sq km. According to the CBS 2011, the total population and household number of the Rural Municipality is 15,303 (Male: 7,763 and Female: 7,540) and 2,421 respectively.

The survey team carried out the survey in this municipality starting from Thirpu, the headquarter of municipality. The trail from Thirpu to Ward 2 was narrow and was not easy to walk. There were log bridges in many locations of the trail.

The survey team found clustered settlement in the municipality. Most houses are mud houses. People go to India for business or employment and also depend on agriculture for livelihood. People use solar powered lights in most of the houses and electricity from a micro hydropower is also available.

Landslide, Rock fall and Snowfall are the major hazard of the Rural Municipality. Landslides are the most recurring hazards which account for about 83% of the total hazards in Patala Rural Municipality. The other major hazards are rockfall and rockslides.

At two locations in the trail, these hazards were passable with caution, 10 with minor rehabilitation and one location where the hazards were identified needed major rehabilitation for accessibility. A total of 18 constraints were identified in the trails of Palata Rural Municipality. Constraints such as narrow width, rocky way, stream crossings were identified in the trails, 33.33% of these constraints in the trail were passable with caution, rest other required minor to major rehabilitation to make the trail passable. More than 35% of obstacles were stream crossing which were at high risk. Two of them included stream without bridge which is not passable during monsoon.

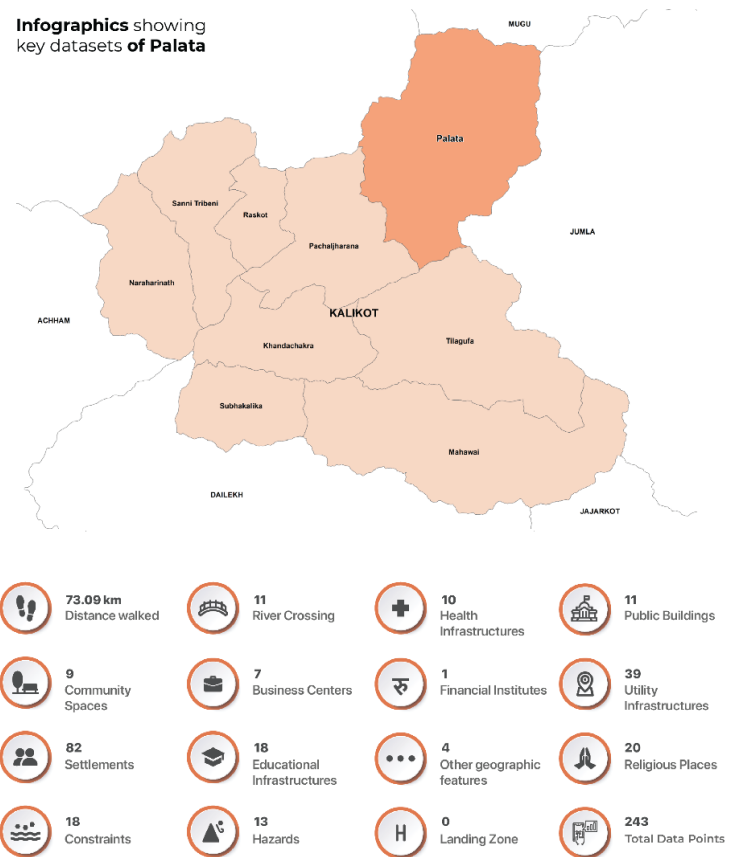


Figure 15: Key datasets of Palata Rural Municipality

#### 4.4.1.7 Raskot Municipality

Raskot Municipality is surrounded by Pachaljharana Rural Municipality in the east, Sanni Tribeni Rural Municipality in the west and Bajura district in the north. The total area of the municipality is 59.63 sq km. According to the CBS 2011, the total population and household number of the Raskot Municipality is 16,272 (Male: 8,076 and Female: 8,196) and 2685 respectively. The municipality office is based in RCP bazar.

The major market centers are RCP bazar and Shantighat bazar. Raskot municipality is one of the prosperous municipality within the district. However, there is just 4 hours of electricity supply since a hydropower supplying electricity was damaged during a landslide incident of July 2020.

The municipality is touched by the Karnali Corridor. Although the municipality has motorable roads upto the Karnali river, motorable bridge across the river is missing. At present, porters transport goods to and from the municipality through the suspended trail bridge. The existing bailey bridge are being replaced by motorable bridge, and once the development is completed, the municipality will be accessed throughout the year.

Landslide was identified as the one of the most recurring hazards along the trails of Raskot Municipality, followed by rockfall. At six locations in the trail, the landslides were passable with caution. The trail required minor rehabilitation at three locations and major rehabilitation for safe access A total of 46 constraints were identified in the trails of Raskot Municipality. The identified narrow width along the trail were passable with caution, rocky way and stream crossings were the major constraints in the trails. The narrow width along the trailare passable with cautions. Majority of rehabilitations were required in stream crossings without bridges.

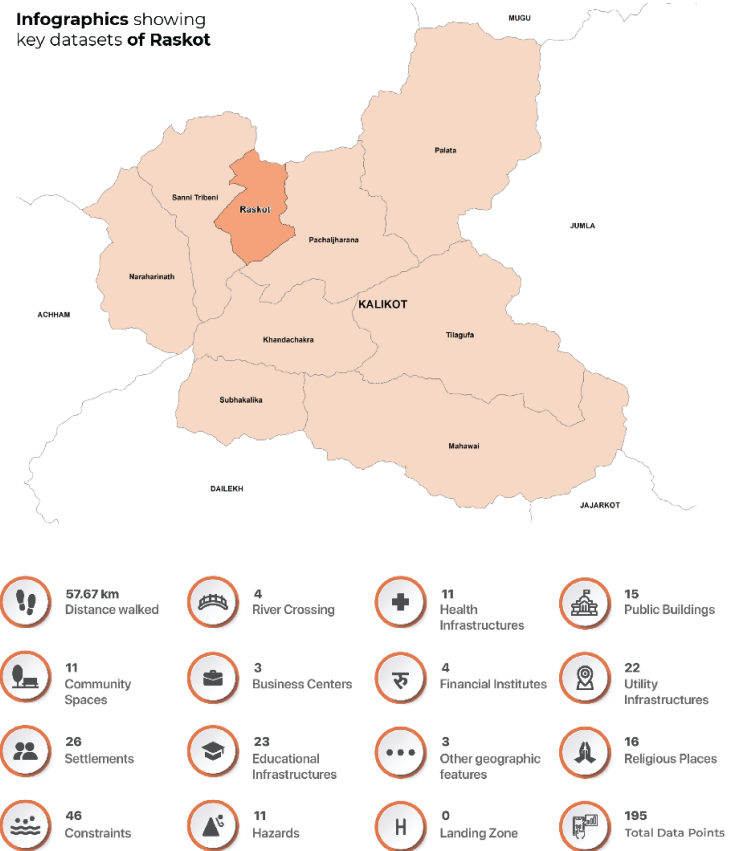


Figure 16 : Key datasets of Raskot Municipality

#### 4.4.1.8 Sanni Tribeni Rural Municipality

Sanni Tribeni Rural Municipality is surrounded by Raskot Municipality in the east, Naraharinath Rural Municipality in the west, Bajura district in the north and Khandachakra Municipality in the south. The total area of the municipality is 136.46 sq km. According to the CBS 2011, the total population and household number of the Sanni Tribeni Rural Municipality is 12,846 (Male: 6,378 and Female: 6,468) and 2,105 respectively.

For field data collection, the survey team started from Serijiula village where the trail route had steep slope. The rural municipality office is based in Mehalmudi bazar. There was scattered settlement in Mehalmudi, which is the municipality headquarter. The ward office of ward 4, 5 and 6 are located within 20 minutes walking distance from one another.

The Karnali corridor passes through Sanni Tribeni. The existing bailey bridges are being replaced by motorable bridge, and once the development is completed, the municipality will be accessed throughout the year.

Landslide and flash flood are the major hazard of the Sanni Tribeni Rural Municipality. In 2020, four houses, a hydropower built in Sanni Tribeni, and a suspended bridge were swept away. At present, people walk over the river for crossing.

Five landslides and one flood hazards were identified in the trails of Sanni Tribeni Rural Municipality. At three locations in the trail, these hazards were passable with caution and three with minor rehabilitation for accessibility. A total of 23 constraints were identified in the trails of Sanni Tribeni Rural Municipality. Constraints such as narrow width, rocky way, rock fall, stream crossings, were identified in the trails, 96% of these constraints in the trail were passable with caution and a location with rock fall required minor rehabilitation for safer access.

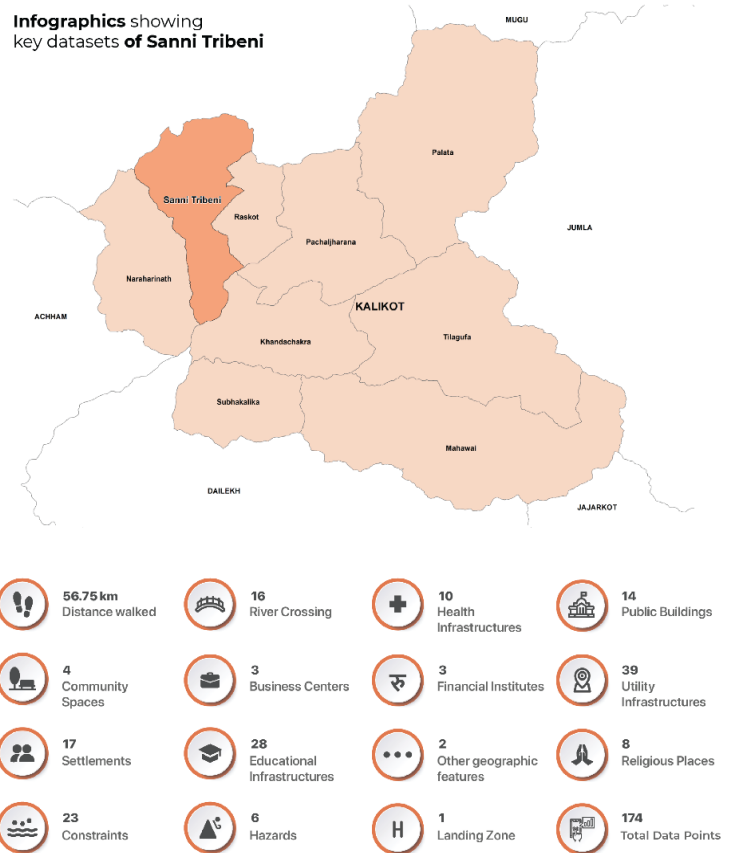


Figure 17 : Key datasets of Sanni Tribeni Rural Municipality

#### 4.4.1.9 Tilagufa Municipality

Tilagufa Municipality is surrounded by Jumla district in the east, Khandachakra Municipality in the west, Palata Rural Municipality in the north, Pachajharana Rural Municipality in the north west and Mahawai Rural Municipality in the south. The total area of the municipality is 262.2 sq km. According to the CBS 2011, the total population and household number of the Tilagufa Municipality is 15,766 (Male: 7,854 and Female: 7,912) and 2,693 respectively.

In this municipality, the settlement was dense mostly in the ridges of the hills and near the Karnali highway. The houses were mostly made of mud. People used solar powered lights as other source of electricity is not available. The major market centers are Gela bazar, Nagma bazar, and Thinke bazar. People living near Nagma bazar have adopted business as an occupation and in other places agriculture is the major occupation.

The municipality office is based in Gela.

The Karnali highway passes through Tilagufa connecting Jumla district at Nagma bazar. The Karnali highway is blacktopped and is accessible throughout the year. The trails that were connected to the highway was steep. Motorable road connection was available in some part of the municipality.

Landslide is the major hazard of the Tilagufa Municipality. 14 landslide hazards were identified in the trails of Tilagufa Municipality. At three locations in the trail, these hazards were passable with caution. However, at five locations minor rehabilitation is required and at two locations, major rehabilitations for accessibility is needed. A total of 37 constraints were identified in the trails of Tilagufa Municipality. Constraints such as narrow width, rocky way, and stream crossings were identified in the trails. 97% of these constraints in the trail were passable with caution and at one location bridge required for stream crossing.

Infographics showing key datasets of Tilagufa

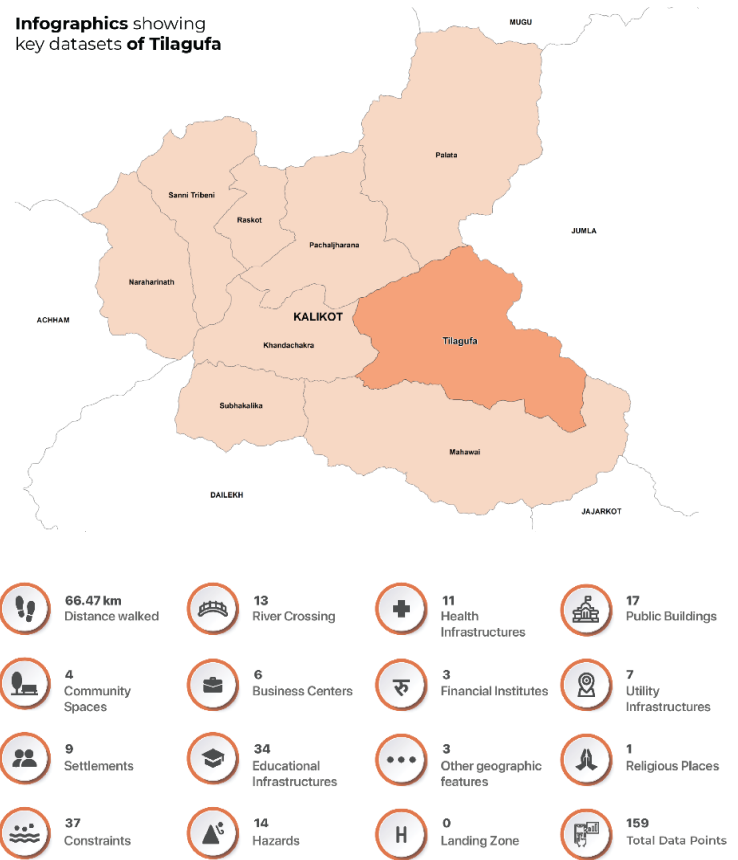


Figure 18: Key datasets of Tilagufa Municipality

## **CHAPTER 5 : CHALLENGES AND RECOMMENDATIONS**

### **5.1 Challenges**

This section briefly talks about the challenges that the YI-Lab team faced while implementation of program activities in Kalikot district during the project period.

#### **5.1.1 COVID 19 Pandemic**

The unforeseen situation created by the COVID-19 pandemic affected the implementation of the project in multiple ways. Due to the lockdown imposed by the district-level government till 16 September 2020, the pre-planned fieldwork had to be halted and postponed to November. The whole activities were again rescheduled, which affected the project deliverables. As the mobility of people was completely restricted during lockdown, the field activities such as data need assessment, data collection, and stakeholder's coordination were highly impacted.

Due to the increasing number of COVID-19 cases, it was very hard to manage the technical team/ mappers from Kathmandu to deploy into the field. The parents of those mappers were very reluctant to send their children because of the increasing havoc of COVID-19 pandemic. Furthermore, when the mapper's team from Kathmandu reached Kalikot district, the environment was not welcoming and was difficult to find accommodation; the mappers faced a huge challenge in receiving the relevant information because local people did not show the friendly nature due to the fear of getting infected from COVID-19.

#### **5.1.2 Telecommunication Network**

The network connection was poor in Kalikot district. Due to poor internet connection, communication directly to local level officials for gap analysis data collection, and sending the e-mail invitations for orientation and training programs was affected. It also impacted reporting to WFP office during the fieldwork. Further, its impact was also seen on training program– the poor internet connection made it difficult to provide JOSM training to the participants.

#### **5.1.3 Electric Power Shortage**

The shortage of electric power is a huge challenge in Kalikot district. Most of the houses and institutions only have the solar power or generator-based electricity supply that is very limited, while in many places there are no power at all. Due to the shortage of electric power, it was difficult to operate multiple devices at a time, which not only affected the training program but also created difficulty during data collection.

#### **5.1.4 Challenges with Satellite Imagery during Remote Mapping**

For the remote mapping of the Kalikot district, the Maxer's premium satellite imagery was used. However, using this imagery was a huge challenge in terms of recognizing the building footprints and other amenities. Many places on this imagery were covered by clouds that create difficulty in mapping while some of the areas and features were, we hard to recognize from the distance.

## 5.2 SWOT Analysis Matrix

The SWOT analysis was conducted to identify the internal and external factors that helped or hindered the implementation of the project. It further helped us to understand areas that need improvement if similar projects are to be done in the future. As per the SWOT analysis, skilled team members, proper logistic management, and field planning were the success factors of the project while inexperience in similar projects and lack of time management were identified as weaknesses. Further, the emerging demand of OSM, availability of appropriate technology, cooperative nature of local governments, and motivation among the youths to learn and use OSM contributed to successfully implement the project in the Kaliokot district. On the contrary, the prevailing COVID – 19 pandemic, poor communication network and electricity, and lack of logistic facility hindered the smooth implementation of the project.

<p><b>Strengths</b></p> <p><i>Attributes of the organization that help achieve the project objective.</i></p>	<p><b>Weaknesses</b></p> <p><i>Attributes of the organization that stop achievement of the project objective.</i></p>
<ul style="list-style-type: none"> <li>• <i>Skilled team members with good and advance knowledge on remote mapping and OSM</i></li> <li>• <i>Proper arrangement of logistics items along with the backup of essential equipment</i></li> <li>• <i>Well planned field activities</i></li> <li>• <i>Timely execution of orientation, training and field data collection activities</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Inexperience of organization in doing field activities at remote locations</i></li> <li>• <i>Meeting the deadline of reporting and critical milestone set in project timeline</i></li> <li>• <i>Change in local facilitator within the gap analysis activity</i></li> </ul>
<p><b>Opportunities</b></p> <p><i>External conditions that help achieve the project objective.</i></p>	<p><b>Threats</b></p> <p><i>External conditions that could damage the project.</i></p>
<ul style="list-style-type: none"> <li>• <i>DRRM as priority agenda for DAO</i></li> <li>• <i>Developing and emerging demand of OSM</i></li> <li>• <i>Realization of local level government on the need of location and resource map.</i></li> <li>• <i>Availability of tools like Menti for response collection</i></li> <li>• <i>Accuracy of GPS devices</i></li> <li>• <i>Motivation among the youths to use OSM Tracker and GPS devices</i></li> <li>• <i>Good cooperation from the local government</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>COVID –19 pandemic</i></li> <li>• <i>Telecommunication network was non-functional / disturbed</i></li> <li>• <i>Electric Power shortage</i></li> <li>• <i>Change in planning by DAO office</i></li> <li>• <i>Change in weather (extreme cold and sudden snowfall in certain area)</i></li> <li>• <i>Difficult terrain / landscape for data collection</i></li> <li>• <i>Lack of logistic facility in many villages</i></li> <li>• <i>Inconsistency on the trail routes due to tracks being opened along the trail.</i></li> <li>• <i>Smartphone available among youth, but, apps like OSM Tracker not in use.</i></li> </ul>

### 5.3 Lessons Learned

- a. The meeting with the District Disaster Management Committee (DDMC) should be conducted before a gap analysis. This would, on one hand, sensitize DDMC on the importance of data preparedness for emergency response and on the other hand, ensures the quality of the primary data collection.
- b. For the successful implementation of any project at the local level, it is important the government first, own it. And to develop a sense of ownership, it is imperative that a favorable and comfortable environment is created for them. The approach that WFP and YI-Lab had undertaken to conduct orientation and training programs and field data collection was successful enough to develop a feeling of ownership on DAO - Kalikot. YI-lab, being a facilitator, conducted the training and orientation under the leadership of DAO – Kalikot. The overall management from coordinating with the respective stakeholders to chairing of the program were undertaken by the DAO themselves. Through this approach, ownership of DAO was clearly visible.
- c. OSM mapping-related training should be provided to the local youths on a larger scale. Moreover, it would have been more effective if the OSM mapping for the Kalikot district was planned and conducted involving the local youths themselves and provided with extensive training on handling the various tools and techniques of OSM mapping. This would play a key role in advancing the digital skills of local youths and also in sustainability of the program itself.
- d. In-person meeting with the ward and municipal officials at their respective offices was effective in terms of developing good local coordination, engaging them in mapping activities, and enhancing their digital skills and capacity. Therefore for effective outputs, the meeting should be conducted with ward and municipal officials at their respective offices during the field data collection process.
- e. The quality of collected data would have been much better if more emphasis was given to the data collection mechanism. In training, the quality time was spent on explaining OSM and other details about the project while there was limited time allocated for the core technical part and simulation exercise on data collection resulting in the inconsistency in collected data and tagging attributes.
- f. The location information is key for the planning purpose. Due to the limited information on the availability of electric power in different locations of the Kalikot district, the smooth execution of the project activities, especially the training on OSM, was affected. Also, there was a problem in running the devices especially laptops and mobile phones due to limited charges. Pre information about the location and its situation would help to plan properly for the smooth execution of the project activities.
- g. The local guide deployed in the team should be fluent in both Nepali and local languages. There were some instances where the communication and coordination for data/information were difficult due to language barriers.

## CHAPTER 6: SUSTAINABILITY PLAN

- a. The data and information are key for informed decision-making during a time of disaster. Often the problem with the data is that once they are collected, their existence and uses are limited within the paper and report. Neither are they recognized due to the limited accessibility nor are used on day-to-day work for planning and operational purpose. Additionally, no process exists within the government to update the data once collected hindering its sustainability. Hence, there should be a mechanism in place within the local government to update the data, add the data, delete and modify the data if needed. There should also be a linkage of those datasets to the Government of Nepal's BIPAD portal to ensure its long-term sustainability, utility, and recognition. This links directly with the target set on the Disaster Risk Reduction National Strategic Plan of Action (2018-2030) Priority Area 1: Understanding Disaster Risk, which highlights the availability and use of open data and open-source technology for effective disaster preparedness and response.
- b. There should be a trained group of Youth and Young Professionals (YYPs) at the local level in handling OSM tools that ensure the long-term sustainability of data update in OSM platform. Furthermore, the linkage of YYPs to the State of the Map Platforms and Learning Opportunities of Open Data Forum can further expand the mappers and contributors at the local level. The establishment of the OSM youth chapters such as Youth Mappers, Digital Volunteers, Disaster Risk Reduction-Young Leaders Fellowship can also be instrumental in enriching the local data and outreaching to the maximum contributors.
- c. The trail and community infrastructure mapping and its update mechanism should be linked with the annual plan and policies of the Government of Nepal. This should reflect in the periodic planning process so that the Government can take an initiative and also the leadership on data up-gradation. This links to the target set by the GoN on the Disaster Risk Reduction National Strategic Plan of Action (2018-2030) that mentions mapping the disaster vulnerable structures, historical and cultural heritage, government, and private buildings, population, shelters, schools, hospitals, health posts, water supply structures and providing them publicly”.
- d. Data on the human settlements, critical infrastructures, and hazard and access constraints are key to understand the disaster risk of the locality and undertake the risk reduction or mitigation actions accordingly. The increasing use of data by the local governments for formulating the risk reduction and mitigation plan can ensure the sustainability of the project. This would require a continuous process of data collection related to constraints and hazards from the trained youths or with the involvement of YYPs.
- e. The OSM community including the digital volunteers, YYPs, DRR-YFP should be mobilized to map, validate and update the remotest districts of Nepal like Kalikot, Dolpa, Bajhang, and Bajura on a periodic basis. The formation of OSM local chapters or partnership with the organizations working in OSM can be instrumental to ensure the up-to-date data in OSM and to maintain long-term sustainability. Youth Innovation Lab as a major contributor to OSM community from Nepal can take lead of updating the OSM mapping taking support from local, national, regional and global stakeholders.

## CHAPTER 7: CONCLUSION

The information on trail routes are crucial especially for the first responders such as Nepal Police, Nepal Army, Fire department, Emergency Medical Services to know how to access different areas of the trail network and facilitate timely response during an emergency. Understanding its significance for disaster preparedness and response, the Trail and Community Infrastructure Mapping was conducted in Kalikot district, which is one of the disaster prone and remote area of Nepal. In addition to data preparedness and enrichment, the project has capacitated the local people in mapping and has broadened their knowledge on digital data and use of data for decision making for emergency preparedness and response. In total 19 local youths were trained - not only have their digital leadership skills improved but it has also made them aware of the hazards in their area. They have learnt about how to use open data and open mapping, hence, can assist their communities and local government in mapping their risk and can help address humanitarian, disaster and development needs.

Kalikot district is exposed to multiple hazards. Landslide is the most prominent hazard of the region. 100 landslide inventory data were collected and mapped followed by 7 Rockfall and 1 Rockslide. Alongside, geo-tagged data of critical infrastructure were also collected and mapped, which includes 222 educational institution, 37 financial institution, 96 health facility, 163 public buildings, 57 community spaces, 38 business center, 104 religious places, 96 river crossings, 226 utility infrastructure, and 3 emergency logistics/ landing zones data. Furthermore, 240 settlement areas and 32,246 building in OSM were mapped. Maps describing the location and settlement characteristics, critical infrastructures like hospitals, road networks and other facilities, and disaster risk can not only prepare the data locally and before a disaster, but also helps to increase community's awareness of disaster risk. During the time of disaster, they are a key information for directing relief, understanding the risk of secondary disasters and locating resources. In addition to above, 518.45 km of trail routes were also mapped in Kalikot district, which is highly valuable information when planning for effective response.

The data and information are a key element during a disaster, of which maps are an important part. Along with Kalikot, other vulnerable districts in Nepal like Bajhang, and Bajura etc where the mapping of critical infrastructures and hard to reach communities are deemed needed, should be mapped. Together with mapping, the data and information should also be updated periodically.



Lastly, the citizen-science approach can help to make the mapping approach more effective and impactful i.e., using the local volunteers to collect and process the data. Forming a trained group of YYPs at the local level, establishing OSM youth chapters such as Youth Mappers, Digital Volunteers and Disaster Risk Reduction-Young Leaders Fellows would not only help enrich the data at the local level but also keep the data up-to-date and also, ensure sustainability in the long run.

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## ANNEXES

### Annex 1 a. : Letter Issued by DAO

  
नेपाल सरकार  
गृह मन्त्रालय  
जिल्ला प्रशासन कार्यालय  
कालिकोट

फोन नं. ०८७-४४०११२  
फ्याक्स नं. ०८७-४४०१६२  
Email : dao.kalikot@gmail.com  
daokalikot@moha.gov.np

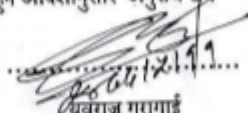
पत्र संख्या : ०७७/७८  
चलानी नं. ४०९

मिति : २०७७/०५/११

विषय : आवश्यक समन्वय र सहजीकरण गरिदने सम्बन्धमा ।

श्री खाँडाचक्र न.पा. कालिकोट ।  
श्री रास्कोट न.पा. कालिकोट ।  
श्री तिलागुफा न.पा. कालिकोट ।  
श्री महावे गा.पा. कालिकोट ।  
श्री शुभकालिका गा.पा. कालिकोट ।  
श्री नरहरिनाथ गा.पा. कालिकोट ।  
श्री सान्नीत्रिवेणी गा.पा. कालिकोट ।  
श्री पचालझरना गा.पा. कालिकोट ।  
श्री पलाता गा.पा. कालिकोट ।

प्रस्तुत विषयमा श्री गृह मन्त्रालय (विपद् अध्ययन, जोखिम न्यूनीकरण तथा पुनर्लाभ शाखा) प.सं. ०७७/७८ च.नं. २८ मिति २०७७/०४/१३ गतेको प्राप्त पत्रानुसार विश्व खाद्य कार्यक्रमको Ref 07/12/EOR/2020 मिति १३ जुलाई २०२० को पत्र मार्फत यस जिल्लामा Trial and Infrastructure Mapping Project संचालन हुने भएकोले उक्त कार्यमा खटिएर आउने टोलीलाई आवश्यक समन्वय एवं सहजीकरण गरिदिनु हुन आदेशानुसार अनुरोध छ ।

  
युवराज गुरगाई  
(सहायक प्रमुख जिल्ला अधिकारी)  
युवराज गुरगाई  
सहायक प्रमुख जिल्ला अधिकारी

**बोधार्थ :-**  
World Food Program / Youth Innovation Lab.

Annex 1 b. : Letters from Municipalities



खाँडाचक्र नगरपालिका  
नगर कार्यपालिकाको कार्यालय  
मोल्म, कालिकोट  
कर्णाली प्रदेश, नेपाल

फोन नं. ०८७-४४००१२

website : www.khandachakramun.gov.np  
E-mail : khandachakra.mun@gmail.com

पत्र संख्या : २०७७/०७८  
चलानी नं. : ८९४

मिति : २०७७/०८/१६

विषय : जानकारी सम्बन्धमा !

श्री, युथ इनोभेसन ल्याब  
काठमान्डौ, नेपाल ।

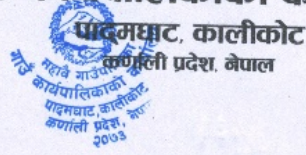
प्रस्तुत विषयमा जिल्ला प्रशासन कार्यालय कालिकोटको पत्र संख्या ०७७/७८, चलानी नं ४०१ मिति २०७७/०५/११ को प्राप्त पत्रानुसार विश्व खाद्य कार्यक्रम र युथ इनोभेसन ल्याब बिच कर्णाली प्रदेश कालिकोट जिल्लाका नौ वटै स्थानीय तहमा सञ्चालन हुने पैदलमार्ग र स्थानीय पुर्वाधार नक्साङ्कन कार्य ( **Trial and community Infrastructure mapping Activity** ) को तर्होवाट खटी आएका प्राविधिक टोली यस नगरपालिकाका सबै ११ वटै वडाको क्षेत्रमा आई कार्य सम्पन्न गरेको र उक्त टोलीलाई यस नगरपालिकाकाले आवश्यक सहयोग, सहजीकरण एवं परामर्श गरिएको व्यहोरा जानकारीका लागि अनुरोध छ ।

बोधार्थः  
जिल्ला प्रशासन कार्यालय  
मान्म, कालिकोट ।

खडक प्रसाद उपाध्याय  
प्रमुख प्रशासकीय अधिकृत  
खडक प्रसाद उपाध्याय  
प्रमुख प्रशासकीय अधिकृत



महावै गाउँपालिका  
गाउँ कार्यपालिकाको कार्यालय



पत्रसंख्या : २०७७/०७८  
चलानी नं. २०३

मिति : २०७७/०८/१८

विषय : जानकारी सम्बन्धमा ।

श्री युथ इनोभेसन ल्याब,  
गौरीधारा, काठमाण्डौ ।

प्रस्तुत विषयमा जिल्ला प्रशासन कार्यालय, कालिकोटको चं.न २०५, मिति २०७७.०५.१९ गतेको प्राप्त पत्रानुसार साथै युथ इनोभेसन ल्याबको मिति २०७७.०८.०३ गतेको प्राप्त वाट विश्व खाद्य कार्यक्रम र युथ इनोभेसन ल्याब बीच कर्णाली प्रदेश कालिकोट जिल्लाको ९ वटै स्थानीय तहमा सञ्चालन हुने (Trial and community infrastructure mapping activity) पैदलमार्ग र स्थानीय पूर्वाधार नक्साकन कार्य कार्यक्रम हुने व्यहोरा पत्र मार्फत प्राप्त भई सोही पत्रानुसार तहाँ कार्यालयका प्रतिनिधिहरु यस गाउँपालिका भित्र आएको र उक्त कार्य सम्पन्न गर्न यस गाउँपालिकाबाट आवश्यक समन्वय र सहजिकरण गरिएको व्यहोरा जानकारीको लागि अनुरोध छ ।

बोधार्थ

श्री जिल्ला प्रशासन कार्यालय कालिकोट ।

(निमित्त प्रमुख प्रशासकीय अधिकृत)

निमित्त प्रमुख प्रशासकीय अधिकृत

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पलाँता गाउँपालिका  
गाउँ कार्यपालिकाको कार्यालय  
पलाँता, कालीकोट  
कर्णाली प्रदेश, नेपाल

पत्र संख्या :- २०७७/०७८

सलानी नं.:- ३०८

मिति :- २०७७/०६/२८



विषय : जानकारी गराईको सम्बन्धमा ।

श्री युथ ईनवभेसन ल्याव  
गौरीधारा, काठकाण्डौ ।

प्रस्तुत विषयमा जिल्ला प्रशासन कार्यालय कालीकोटको प.सं. ०७७/०७८ च.नं. २०५ मिति २०७७/०८/१० गतेको प्राप्त पत्र र युथ ईनवभेसन ल्याव को च.नं. २०/२०७७/०७८ मिति २०७७/०८/१० गतेको प्राप्त पत्रबाट विश्व खाद्य कार्यक्रम र युथ ईनवभेसन ल्याव विच कर्णाली प्रदेश कालीकोट जिल्लाको नौ वटै स्थानीय तहमा संचालन हुँने "Trial and Community Infrastructure Mapping ActivitY" (पैदल मार्ग र स्थानीय पूर्वाधार नक्साङ्कन कार्य) कार्यक्रम हुँने व्यहोरा पत्रमार्फत प्राप्त भई सोही पत्रानुसार तहाँ कार्यालयका प्रतिनिधिहरु यस गाउँपालिका भित्र आएको र उक्त कार्य सम्पन्न गर्न यस गाउँपालिकाबाट आवश्यक समन्वय र सहजीकरण गरिएको व्यहोरा जानकारीको लागि अनुरोध छ ।

बोधार्थ :

१. श्री जिल्ला प्रशासन कार्यालय मान्मा, कालीकोट ।

नि. प्रमुख प्रशासकिय अधिकृत

“हाम्रो पलाँता राम्रो पलाँता”

अध्यक्ष : ९८५८३९००३४ नि.प्र.अ. : ९८४२३५४९३० लेखा : ९८६८१०३६१० IT Officer: ९८५८३२२५३२  
Wed: www.palatomun.gov.np Gmail : ito.palatomun@gmail.com



रास्कोट नगरपालिका  
नगर कार्यपालिकाको कार्यालय



आर.सी.पी.-५, कालिकोट  
कर्णाली प्रदेश, नेपाल

२०७३



प.सं : ०७७/०७८

मिति : २०७७/०८/११

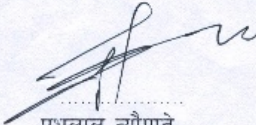
च.नं. २४४

विषय : जानकारी गराइएको बारे ।

श्री युथ ईनवभेसन ल्याव,  
गौरीधारा, काठमाण्डौ ।

प्रस्तुत विषयमा जिल्ला प्रशासन कार्यालय कालिकोटको प.सं.०७७/७८ च.नं.२०५ मिति २०७७/५/११ गतेको प्राप्त पत्र र युथ ईनवभेसन ल्यावको मिति २०७७/८/३ गतेको प्राप्त पत्र बाट विश्व खाद्य कार्यक्रम र युथवभेसन ल्याव विच कर्णाली प्रदेश कालिकोट जिल्लाको ९ वटै स्थानिय तहमा संचालन हुने ( Trial and community infrastructure mapping activity) । पैदलमार्ग र स्थानिय पूर्वाधार नक्साडकन कार्य) कार्यक्रम हुने व्यहोरा पत्र मार्फत प्राप्त भई सोहि पत्रानुसार तहां कार्यालयका प्रतिनिधि हरु यस नगरपालिका भित्र आएको र उक्त कार्य सम्पन्न गर्न यस नगरपालिका बाट आवश्यक समन्वय र सहजिकरण गरिएको व्यहोरा जानकारीको लागि अनुरोध छ ।

बोधार्थ  
श्री जिल्ला प्रशासन कार्यालय कालिकोट ।

  
प्रभुलाल न्यौपाने  
नि. प्रमुख प्रशासकिय अधिकृत  
नि. प्रमुख प्रशासकीय अधिकृत

"कृषि, पर्यटन, सहरीकरण र विधुतको पूर्वाधार-सुन्दर, सम्बद्ध र उज्यालो रास्कोट को आधार"



नरहरिनाथ गाउँपालिका  
गाउँ कार्यपालिकाको कार्यालय

कुमालगाउँ, कालिकोट  
कर्णाली प्रदेश, नेपाल

पत्र संख्या :- २०७७/०७८

मिति :- २०७७/०८/१२

चलानी नं. ६६१

**बिषय :-** जानकारी गराईएको सम्बन्धमा ।

श्री :- युथ ईन्वभेसन ल्याव  
गौरीधारा, काठमाडौं

प्रस्तुत बिषयमा जिल्ला प्रशासन कार्यालय कालीकोटको प.सं. : ०७७/०७८ च.नं. ४०१ मिति २०७७/०५/११ गतेको प्राप्त पत्र र युथ ईन्वभेसन ल्यावको च.नं.२०/०७७/०७८ मिति २०७७/०४/३० गतेको प्राप्त पत्रबाट बिश्व खाध्य कार्यक्रम र युथ ईन्वभेसन ल्याव बिच कर्णाली प्रदेश कालीकोट जिल्लाको ३ वटा नगरपालिका र ६ वटा गाउँपालिकामा संचालन हुने Trail and Community Infrastructure Mapping Activity ( पैतलमार्ग र स्थानीय पूर्वाधार नक्साडकन कार्य ) कार्यक्रम हुने व्यहोरा पत्र मार्फत प्राप्त भई सोही प्रत्रानुसार तहाँ कार्यालयका प्रतिनिधिहरू यस गाउँपालिका भित्र आएको र उक्त कार्य सम्पन्न गर्न यस गाउँपालिकाबाट आवश्यक समन्वय र सहजीकरण गरिएको व्यहोरा जानकारीको लागि अनुरोध छ ।

बोधार्थ

१. श्री जिल्ला प्रशासन कार्यालय खाँडाचक्र, कालीकोट

अमर बहादुर बटाला  
नि.प्रमूख प्रशासकीय अधिकृत

अधिकृत

प्रमुख



# पचालझरना गाउँपालिका गाउँ कार्यपालिकाको कार्यालय



पत्र संख्या : २०७७/७८  
चलानी नम्बर: २९८

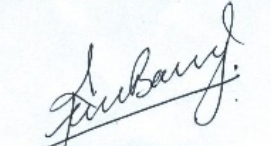
www.pachaljharanamun.gov.np  
Email: pachaljharanagupatika@gmail.com  
It: pachaljharanamun@gmail.com  
Audio Notes board : 1618070768700

मिति : २०७७/०८/१५

विषय : जानकारी गरिएको बारे ।

श्री युथ ईनवभेसन ल्याव,  
गौरीधारा, काठमाण्डौ

प्रस्तुत विषयमा यस जिल्ला प्रशासन कार्यालय कालिकोटको प.स. २०७७/०७८ च.नं. ४०१ मिति २०७७/०५/११ गतेको प्राप्त पत्र र युथ ईनवभेसन ल्यावको मिति २०७७/०८/०३ गतेको प्राप्त पत्र बाट विश्व खाद्य कार्यक्रम र युथ ईनवभेसन ल्याव बिच कर्णाली प्रदेश कालिकोट जिल्लाको नौ वटै स्थानीय तहमा संचालन हुने (Trial and Community infrastructure mapping activity) ( पैदल मार्ग र स्थानीय पुर्वाधार नक्साङ्कन कार्य) कार्यक्रम हुने व्यहोरा पत्र मार्फत प्राप्त भई सोही पत्रानुसार तहाँ कार्यालयका प्रतिनिधिहरु यस गाउँपालिका भित्र आएको र उक्त कार्य सम्पन्न गर्न यस गाउँपालिकाबाट आवश्यक समन्वय र सहजिकरण गरिएको व्यहोरा जानकारीको लागि अनुरोध छ ।

  
कमल बहादुर बर्म  
निमित्त प्रमुख प्रशासकीय अधिकृत  
कमल बहादुर बर्म  
निमित्त प्रमुख प्रशासकीय अधिकृत

“समृद्ध पचालझरना हाम्रो चाहाना ”

☎ 9858322515(पालिका प्रमुख ) 9858322071 (प्र.प्र.अ.) 9858322072(योजना शाखा प्रमुख) 9858322073 ( IT officer)



शुभकालिका गाउँपालिका  
गाउँ कार्यपालिकाको कार्यालय

सुकाटिया, कालीकोट

कर्णाली प्रदेश, नेपाल

पत्र संख्या: २०७७/०७८

चलानी नं.: ३६६६


मिति: २०७७/०८/१५

विषय: जानकारी सम्बन्धमा ।

श्री युथ इनोभेसन ल्याब,  
काठमाडौं ।

प्रस्तुत विषयमा जिल्ला प्रशासन कार्यालय, कालीकोटको प.सं.२०७७/०७८ चलानी नं. ४०१ मिति २०७७/५/११ को प्राप्त पत्रानुसार विश्व खाद्य कार्यक्रम र युथ इनोभेसन ल्याब बीच कर्णाली प्रदेश कालीकोट जिल्लाका नौ वटै स्थानीय तहमा सञ्चालन हुने पैदलमार्ग र स्थानीय पूर्वाधार नक्शाङ्कन कार्य "Trail and Community Infrastructure Mapping Activity" को तहाँबाट खटी आएका प्राविधिक टोली यस गाउँपालिकाको क्षेत्रमा आइ कार्य सम्पन्न गरेको र उक्त टोलीलाई गाउँपालिकाले आवश्यक सहयोग र सहजीकरण गरिएको व्यहोरा जानकारीका लागि अनुरोध छ ।

बोधार्थ :  
श्री जिल्ला प्रशासन कार्यालय,  
कालीकोट ।

  
२०७७/८/१६  
हस्त बहादुर शाही  
नि. प्रमुख प्रशासकीय अधिकृत

“ हामी सबैको चाहना सफा सुन्दर हरित तिलागुफाको कामना ”



तिलागुफा नगरपालिका  
नगर कार्यपालिकाको कार्यालय  
गाल्जे, कालीकोट

कर्णाली प्रदेश, नेपाल

मिति : २०७७/०८/०९

पत्र संख्या : २०७७/०७८

चलानी नं. : ४६३

विषय : आवश्यक सहयोग गरिदिनुहुन ।

श्री तिलागुफा नगरपालिका,  
वडा कार्यालय सबै ।

प्रस्तुत विषयमा जिल्ला प्रशासन कार्यालयको च.नं.४०९,मिति २०७७/०१/१९ को प्राप्तपत्रानुसार विश्व खाद्य कार्यक्रम र इनव्हेसन ल्याबको सहकार्यमा कालीकोट जिल्लाको तिलागुफा नगरपालिकाको विभिन्न वडामा Trail and Infrastructure mapping project ( पैदल मार्ग र स्थानीय पूर्वाधार नक्सांकन कार्यक्रम ) संचालन हुने भएकाले उक्त कार्यमा आवश्यक सहयोग गरिदिनुहुन अनुरोध छ ।

बोधार्थ

श्री जिल्ला प्रशासन कार्यालय, कालीकोट ।

श्री युथ इनोभेसन, ल्याब, गौरीधारा काठमाडौं ।

(लक्ष्मणप्रसाद चौलागाँई )  
नि.प्रमुख प्रशासकीय अधिकृत

नि.प्रमुख प्रशासकीय अधिकृत

Website: [www.tilaguramun.gov.np](http://www.tilaguramun.gov.np)

email id: [tilaguramun@gmail.com](mailto:tilaguramun@gmail.com)

Cellno. 9858320054

## Annex 2: Sensitization \ Orientation Workshop Schedule

### *Workshop on Trail and Community Infrastructure Mapping for Emergency Preparedness and Response 2077*

**Venue:** District Coordination Committee Hall

**Date:** 2077/08/05 (11/20/2020)

**Organizer:** District Administration Office, Kalikot

**Program Coordination:** Youth Innovation Lab / WFP Nepal

#### *Orientation Program Schedule*

S.N.	Time	Program	Facilitator / Speaker
1	11:00 – 11:10	Welcome	Youth Innovation Lab
2	11:10 – 11:40	Introduction to Trail and Community Infrastructure Mapping	Pradip Khatiwada
3	11:40 – 12:40	Special Guests address on Emergency Response and present situation	Rural/Municipality chief and Deputy chief
4	12:40 – 13:00	Address from Chief Guest (DCC)	Ms. Laxmi Bista, Vice Chairperson
5	13:30 – 14:00	Organizer's address on District's Disaster Management Status and Concluding remarks	Mr. Yuwaraj Guragain
6	14:00 – 14:15	Vote of Thanks and Program Conclusion	Youth Innovation Lab



## Annex 4a: Technical Capacity Building Training Schedule

### *Capacity Building Training on Trail and Community Infrastructure Mapping for Emergency Preparedness and Response*

*Venue: District Coordination Committee Hall*

**Date:** 20 -23 November 2020

#### *Training Schedule*

<i>Day 1: Introductory Day</i>	Time	Activity	
Session 1	14:00 - 15:00	Inauguration, Participant Introduction	
Session 2	15:00 - 16:00	Introduction, Participatory exercise on 'How to Reached here? show in maps'	
Session 3	16:00 - 17:00	Introduction to OSM, mapping tools, Tasking Manager, Pre-Training Evaluation	
<i>Day 2: Hands-On Training Day</i>	Session 1	10:00 - 10:30	Recap of Day 1
	Session 2	10:30 - 12:30	Learning exercise to OSM, Tasking Manager, ID editor, JOSM
	Session 3	12:30 - 13:00	Introduction to OSM Tracker
		13:00 - 13:45	Lunch
	Session 4	13:45 - 16:00	Group Exercise on Collecting data via OSM Tracker and demo data collection
	Session 5	16:00 - 17:00	Review of Data Collection via OSM Tracker, and introduction to GPS device
<i>Day 3: Data Input Day</i>	Session 1	10:00 - 10:30	Recap Day 2
	Session 2	10:30 - 12:30	Using JOSM, ID editor,
	Session 3	12:30 - 13:00	Understanding Logbook and Critical Infrastructure
		13:00 - 13:45	Lunch
	Session 4	13:45 - 15:30	Walkthrough on Field Data Collection Guidelines
	Session 5	15:30 - 17:00	Using GPS for field Data collection Equipment
<i>Day 4: Closure and Certification Day</i>	Session 1	10:00 - 10:30	Recap Day 3
	Session 2	10:30 - 12:30	Data and Representation in Maps
	Session 3	12:30 - 13:00	Field data collection activity in Manma
		13:00 - 13:45	Lunch
	Session 4	13:45 - 14:30	Data Protection, Device Handling, Logbook Recording, Digitization
	Session 5	14:30 - 13:30	Review of Data Collection via GPS and OSM Tracker, Post-Training Evaluation
	Session 6	13:30 - 17:00	Certification and Closing

## **Annex 4b: Summary of the training activities on each day**

### **Training Day 1: November 20, 2020**

In the first day, the participants were trained on following topics,

- Introduction and Importance of Mapping
- Participatory exercise on mapping 'How did you reach to this training?'
- Introduction to Open Street Map (OSM)

### **Training Day 2: November 21, 2020**

In the second day, the participants were trained on following topics,

- Creation of OSM ID and using ID-editor
- Installation of OSM Tracker in mobile, orientation and trail implementation of OSM Tracker in the field.
- Installation of JOSM in the laptop, uploading OSM Tracker data collected and visualization.

### **Training Day 3: November 22, 2020**

In the third day, the participants were trained on following topics,

- Map drawing based on OSM Tracker
- Introduction and editing in JOSM
- Introduction to GPS and Data collection using GPS
- Concepts of logbook

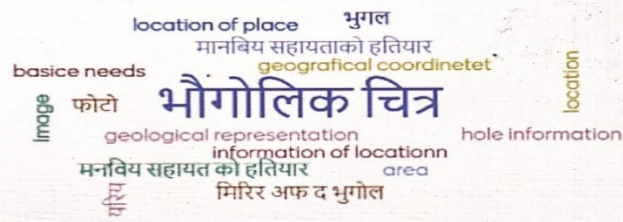
### **Training day 4: November 23, 2020**

On this day, the participants were trained to handle data collection tools. They were then deployed around Manma bazar to collect and verify data. Post- training evaluation was conducted on the same day using the Menti tool. Furthermore, the Field Mapping Guidelines were delivered to the participants to ease in the data collection process.

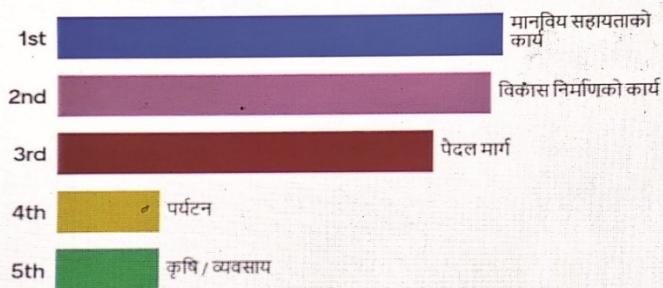


## Annex 6: Pre- Training Evaluation

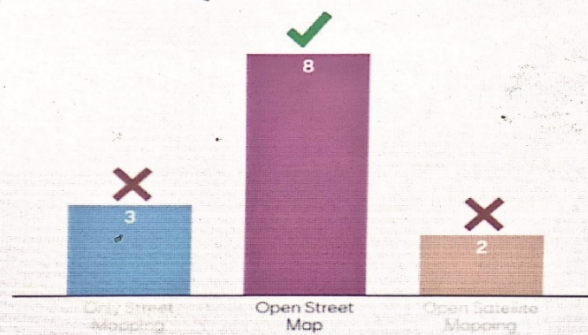
### तपाईंको विचारमा नक्सा भनेको के हो ?



### नक्साको प्रयोग कुन छेत्रमा बढी उपयोग हुन्छ ?



### OSM को पुरा रूप के हो ?



## Annex 7: Post Training Evaluation

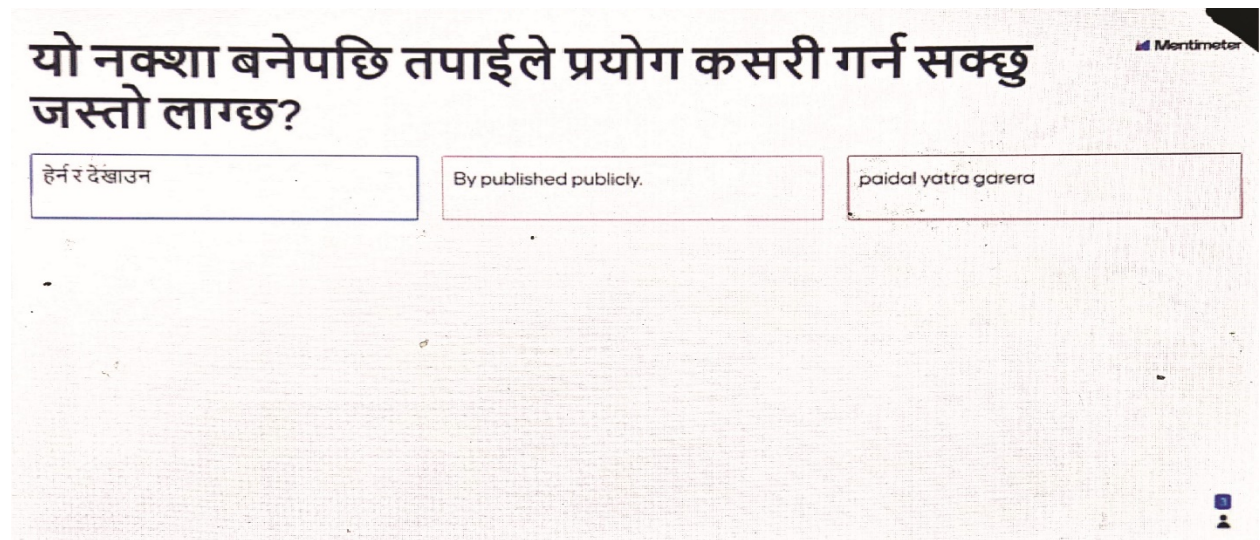
यो नक्शा बनेपछि तपाईंले प्रयोग कसरी गर्न सक्छु  
जस्तो लाग्छ?

हेर्न र देखाउन

By published publicly.

paidal yatra garera

Mentimeter



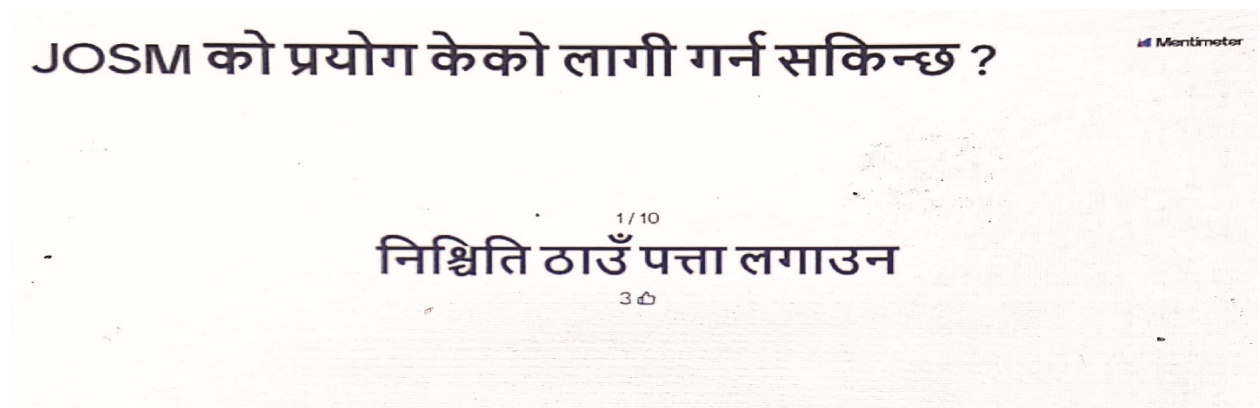
JOSM को प्रयोग केको लागी गर्न सकिन्छ ?

निश्चिति ठाउँ पत्ता लगाउन

1/10

3

Mentimeter



## Annex 8 a: Data Collection Team

Field Data Collection Activity : 24 November – 6 December 2020

### Data Collection Team

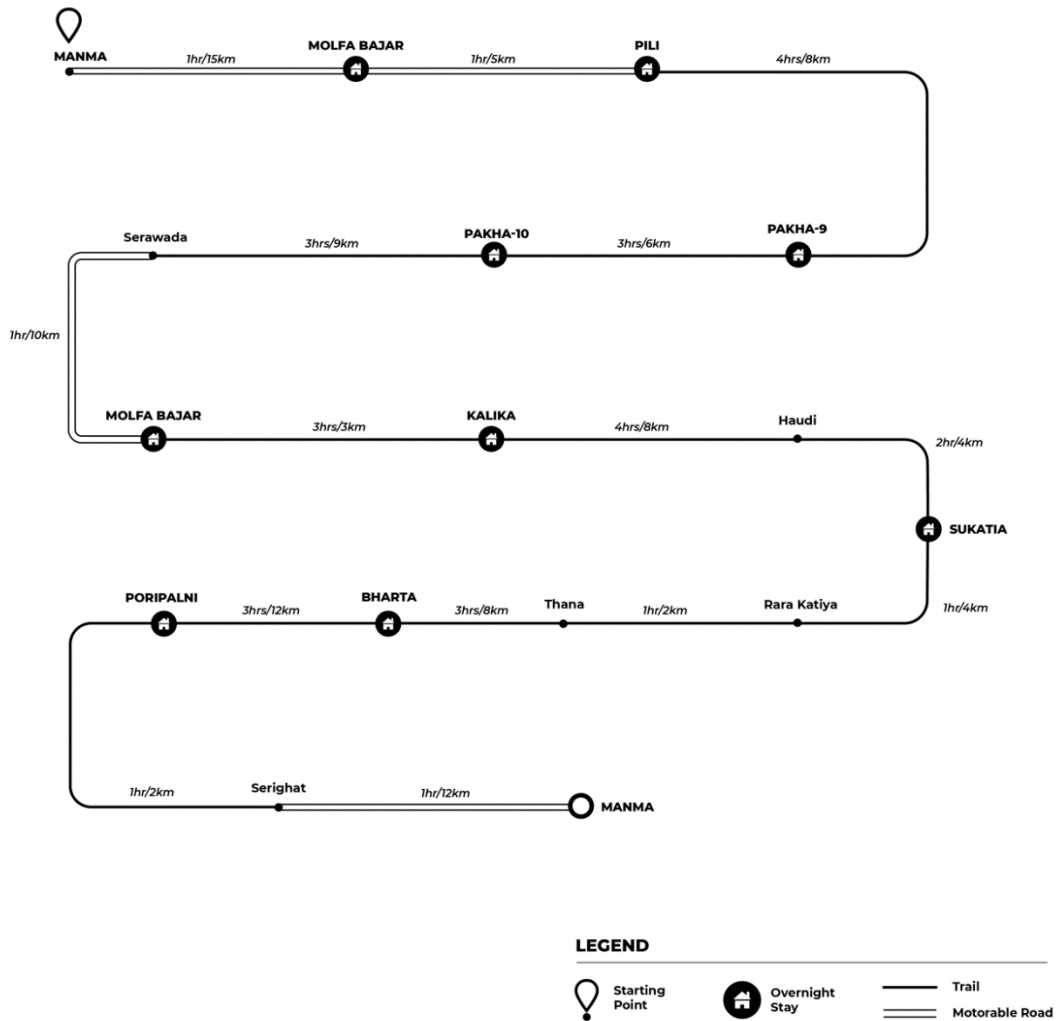
S.N.	Team Number and Municipalities	Name	Gender	Designation	Role
1	Team 1: Khadachakra and Shubhakalika	Abinash Subedi	Male	Team leader	GPS Handling
		Arun K.C.	Male	Team member	Android / OSM Tracker
		Ramesh Shahi	Male	Team member	Porter
2	Team 2: Tilagufa and Mahawai	Milan Subedi	Male	Team leader	GPS Handling
		Nainarupa Adhikari	Female	Team member	Android / OSM Tracker
		Mukesh Bahadur Shahi	Male	Team member	Porter
3	Team 3: Sanni Tribeni and Naraharinath	Mitra Prasad Pandey	Male	Team leader	GPS Handling
		Birata Kumari Bista	Female	Team member	Android / OSM Tracker
		Devi Ram Pandey	Male	Team member	Porter
4	Team 4: Raskot and Pachaljharana	Paras Shrestha	Male	Team leader	GPS Handling
		Sangita K.C.	Female	Team member	Android / OSM Tracker
		Surendra Fadera	Male	Team member	Porter
5	Team 5: Palata and Pachaljharana	Harka Bahadur Shahi	Male	Team leader	GPS Handling
		Prakash Bam	Male	Team member	Android / OSM Tracker
		Tanka Pandey	Male	Team member	Porter

## Annex 8 b: Field data collection route

ROUTE-1

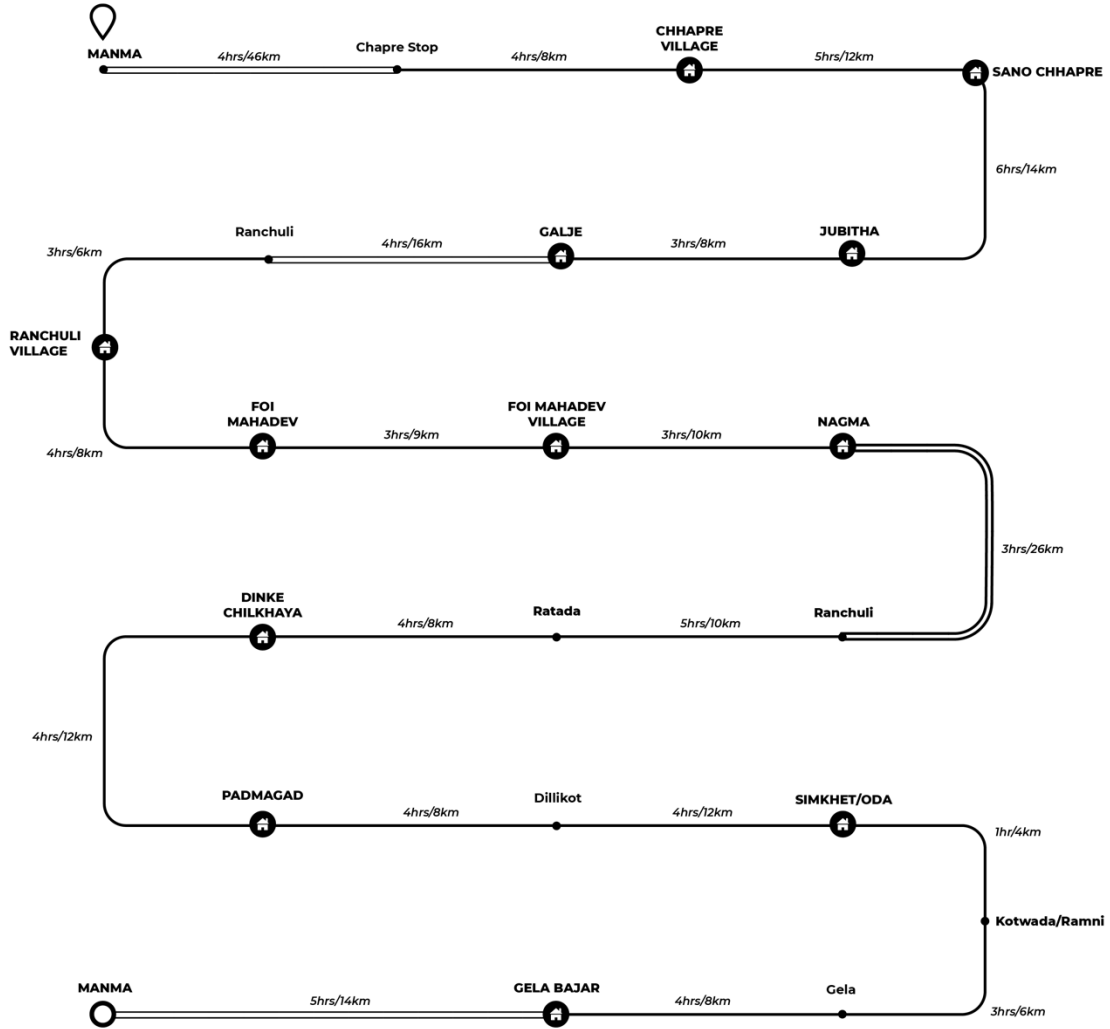
### Trail for Khadachakra-Shubhakalika

Estimated Distance covered: 66 km  
Motorable Road covered: 42 km



ROUTE-2  
**Trail for Tilagufa-Mahawai**

Estimated Distance covered: 157 km  
 Motorable Road covered: 102 km



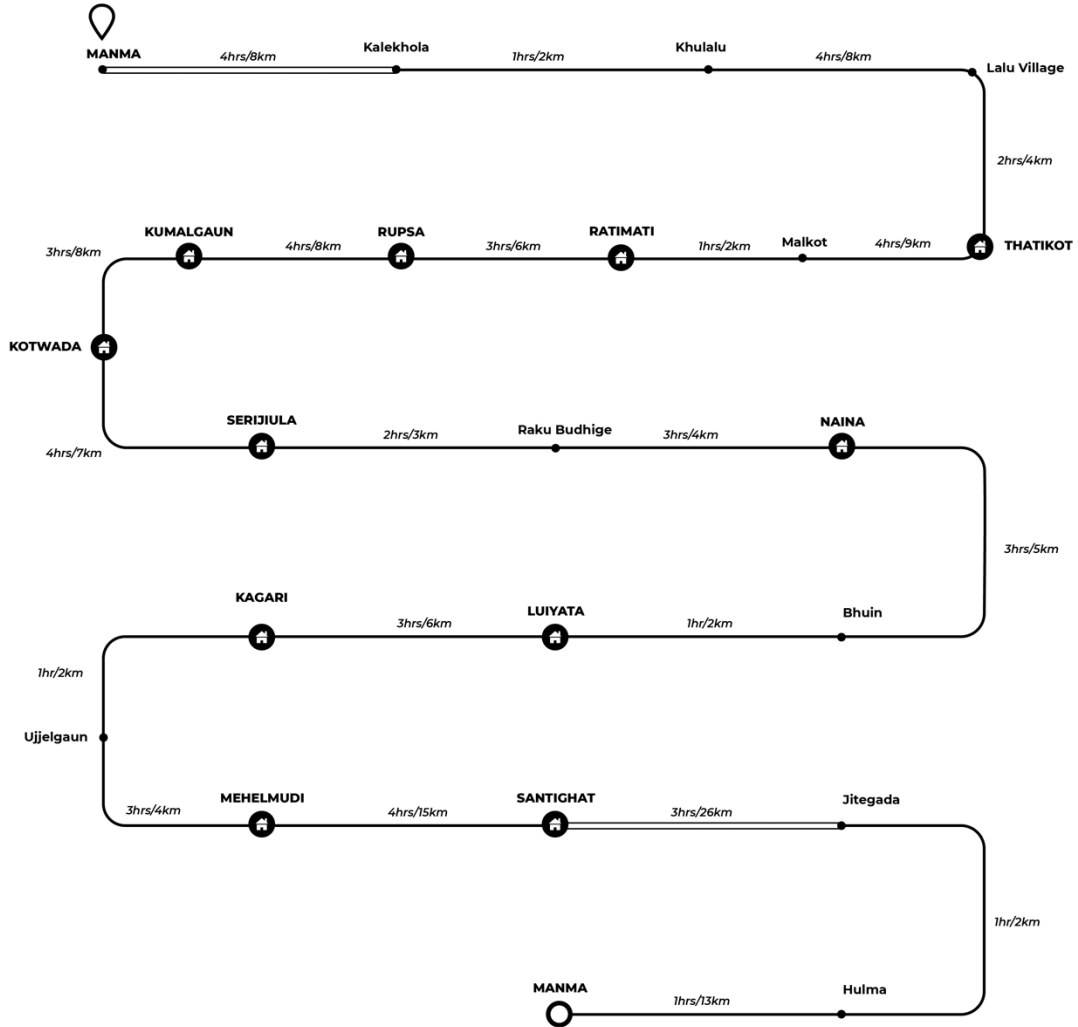
**LEGEND**

-  Starting Point
-  Overnight Stay
-  Trail
-  Motorable Road

ROUTE-3

**Trail for Naraharinath-Sanni Tribeni**

Estimated Distance covered: 95 km  
Motorable Road covered: 54 km



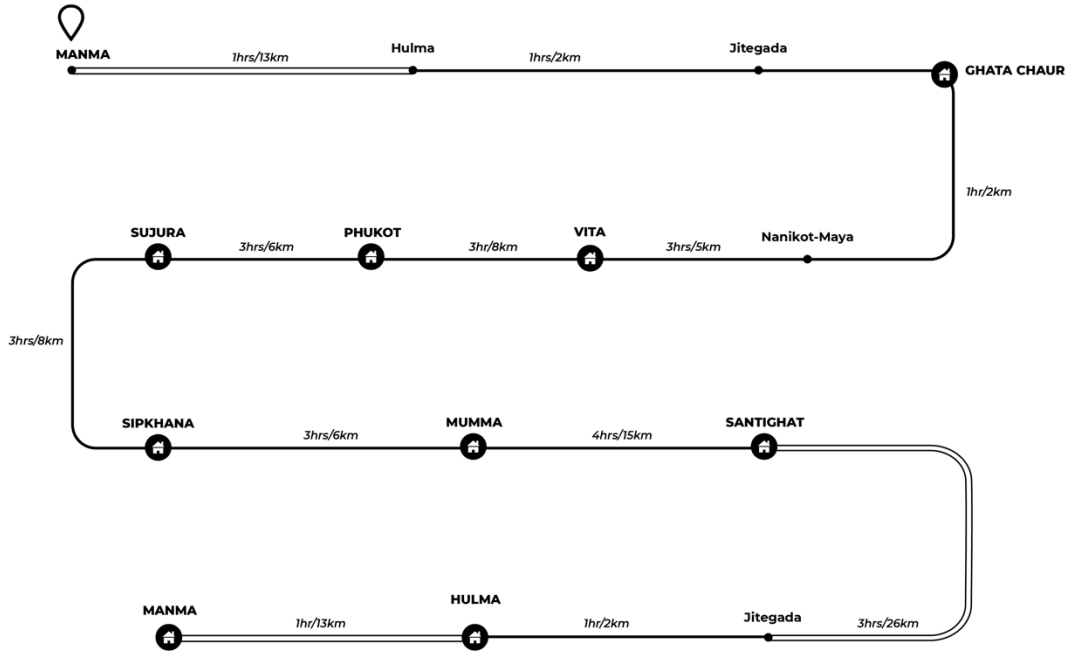
**LEGEND**

-  Starting Point
-  Overnight Stay
-  Trail
-  Motorable Road

ROUTE-4

### Trail for Panchaljarna-Raskot

Estimated Distance covered: 54 km  
Motorable Road covered: 90 km



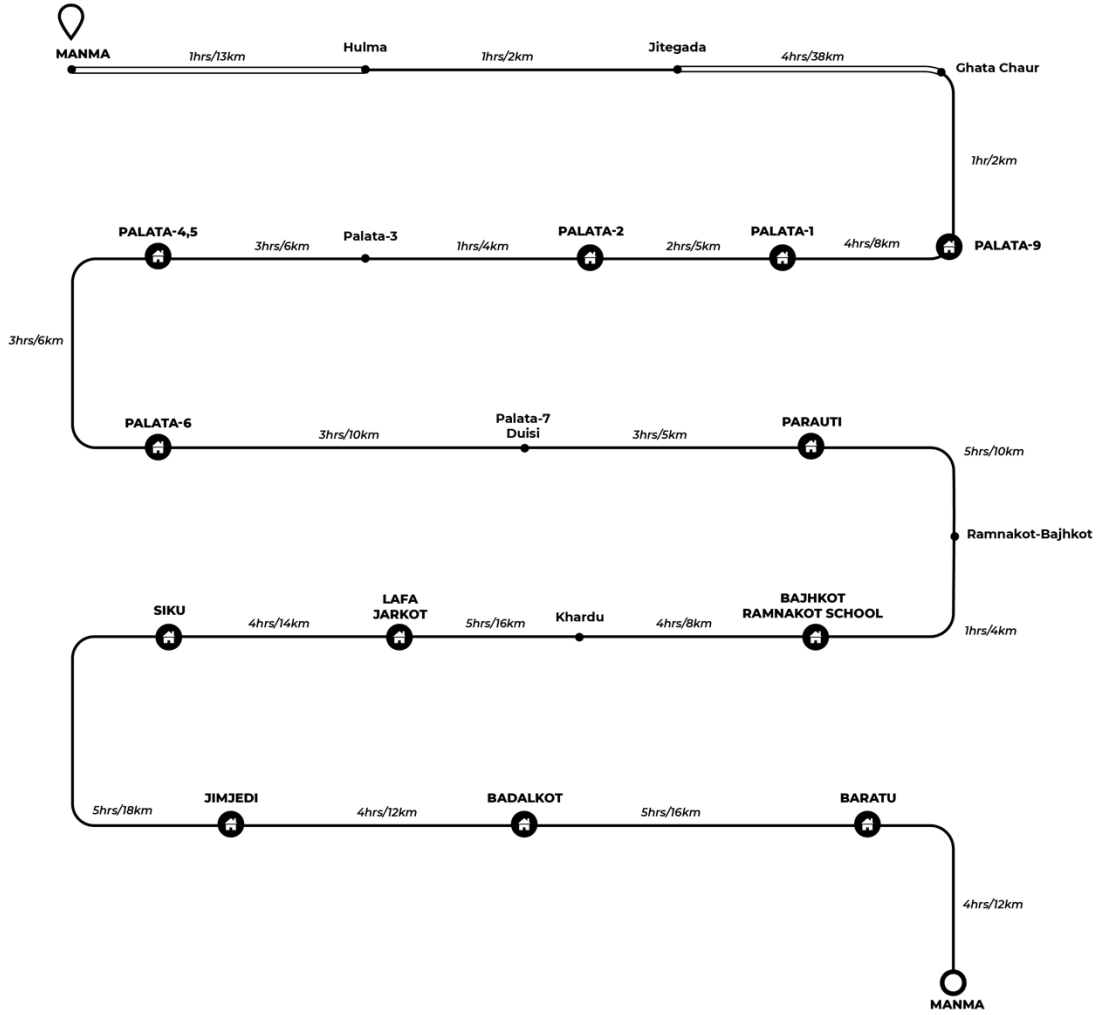
#### LEGEND

-  Starting Point
-  Overnight Stay
-  Trail
-  Motorable Road

ROUTE-5

### Trail for Palata-Panchaljarna

Estimated Distance covered: 158 km  
Motorable Road covered: 51 km



#### LEGEND

-  Starting Point
-  Overnight Stay
-  Trail
-  Motorable Road

## Annex 9: Data Layers and Attributes

Layer Name	Feature Type	Field	Field description	Field Type
<b>Trail network</b>	Polyline	Trail_ty	Trails Type/category	text
		Name	Trail name	text
		Start	Village name of starting point	text
		Via	Village name of in between	text
		End	Village name of ending point	text
		Length_km	Total Length of trail in Kilometer	Double
		Pave_type	Pavement type/Surface Type	text
		Fun_use	Functional use of trail/trail used for	text
<b>Main Trail</b>	Polyline	Trail_ty	Trails Type/category	text
		Name	Trail name	text
		Start	Village name of starting point	text
		Via	Village name of in between	text
		End	Village name of ending point	text
		Length_km	Total Length of trail in Kilometer	Double
		Vill_conn	Number of villages connected	short integer
		Ward_conn	Number of ward connected	short integer
		Mun_conn	Number of municipalities connected	short integer
		Pop_dep	Total population dependent on trail	Long Integer
		No_Link_trail	Number of linking trails	short integer
		Num_pass	Number of mountain pass trail came across	short integer
		Num_gullies	Number of gullies	short integer
		Num_trail_br	Number of trail bridge	short integer
		Num_Str_cross	Number of Stream crossing	short integer
		Num_Rest_pl	Number of resting place	short integer
		Num_Spring	Number of spring/water source	short integer
		Narrow_sec	Approximate length of narrow section (in m)	Double
		Obstacles	Number of obstacles	short integer
		Accessibility	Access to trail	text
Trail_con	Physical condition of trail	text		

		Mun_Plan	Any plan of municipality for improvement or conversion of trail into track/road	text
		Contact	Contact details of local focal person	Text
		Remarks	Any other information	Text
<b>Trail Junction</b>	Point	Name	Name of Junction	text
		Des	Description of junction	text
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Remarks	Any other information	Text
<b>River Crossings</b>	Point	Name	Name of crossing/bridge	text
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Type	Type of crossings/bridges	Text
		Length	Length in meter	short integer
		Width	Width in meter	short integer
		Elevation	Altitude in meter	Double
		Municipality	Name of Municipality	text
		Ward	Ward Number	text
		Condition	Condition of bridge	text
		Image	geotagged photo	raster
		Remarks	Any other information	Text
<b>Heath Amenities</b>	Point	Health_fy	Type of health facility	text
		Name	Name of centre	text
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Municipality	Name of Municipalty	text
		Ward	Ward Number	short integer
		Remarks	Any other information	Text
<b>Public buildings</b>	Point	Name	Name of institution/office	text
		Dept	Department	text
		Municipality	Name of municipality	text
		Ward	Ward Number	text
		Contact	Contact details of local focal person	text
		Geo_Location	Real-world geographic location or GPS coordinates	

		Remarks	Any other information	Text
<b>Community space</b>	Point	Name	Name of structure, place, village	
		Type	Type of open space	text
		Length	Length in meter	short integer
		Width	Length in meter	short integer
		Municipality	Name of Municipality	text
		Ward	Ward Number	short integer
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Image	geotagged photo	Raster
		Remarks	Any other information	Text
<b>Business centers</b>	Point	Name	Name of Business center	text
		Ty_Business	Type of Business center	text
		Place	Name of place	text
		Municipality	Name of Municipality	text
		Ward	Ward Number	short integer
		Num_traders	Number of traders	short integer
		Food_items	Food items available	text
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Image	geotagged photo	Raster
		Remarks	Any other information	text
<b>Constraints</b>	Point	Ty_Constraint	Types of Constraints	text
		Length	Length in meter	Double
		Height	Height in meter	Double
		Risk_ra	Risk rate	text
		Accessibility	Access through obstacle during emergency	text
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Image	geotagged photo	Raster
<b>Hazards</b>	Point	Ty_Hazard	Types of hazard	text
		Length	Length in meter	Double
		Height	Height in meter	Double
		Intr_Occur	Interval of Occurrence	text

		Risk_ra	Risk rate	text
		Accessibility	Access through obstacle during emergency	text
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Image	geotagged photo	Raster
<b>Financial Institutions</b>	Point	Name	Name of institution	text
		Type	Type of institution	text
		Municipality	Name of Municipality	text
		Ward	Ward Number	short integer
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Remarks	Any other information	text
<b>Utility infrastructure</b>	Point	Type	Type of Infrastructure	text
		Capacity	Capacity of structure	text
		Con	Condition of structure	text
		Municipality	Name of Municipality	text
		Ward	Ward Number	short integer
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Remarks	Any other information	text
<b>Settlements</b>	Multi Point	Name	Name of Village	Text
		Population	Total population in village	Long Integer
		Households	Total households in village	short integer
		Single_Women	Number of single women	short integer
		DAG_Pop	Number of disadvantageous population	short integer
		Municipality	Name of municipality	short integer
		Ward	Ward Number	short integer
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Image	geotagged photo	Raster
		Remarks	Any other information	text
<b>Education infrastructure</b>	Point	Name	Name of institution	text
		Ownership	Ownership of Institution	text
		Level	Level of Institution	text
		Municipality	Name of Municipality	Text

		Ward	Ward Number	short integer
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Remarks	Any other information	text
<b>Geographic features</b>	Point	Type	Types of features	text
		Name	Name of feature	text
		Municipality	Name of Municipality	text
		Ward	Ward Number	text
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Remarks	Any other information	text
<b>Religious_Place</b>	Point	Type	Types of features	text
		Name	Name of feature	text
		Municipality	Name of Municipality	text
		Ward	Ward Number	text
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Remarks	Any other information	text
<b>Landing_zone</b>	Point	Name	Name of feature	text
		Type	Types of features	text
		Status	Status of feature (If applied)	text
		Ownership	Owned by	Text
		Size	Area in Sq.m.	Double
		Municipality	Name of Municipality	text
		Ward	Ward Number	text
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Remarks	Any other information	text
<b>Others</b>	Point	Name	Name of feature	text
		Type	Types of features	text
		Status	Status of feature (If applied)	text
		Size	Area in Sq.m.	Double
		Municipality	Name of Municipality	text
		Ward	Ward Number	text
		Geo_Location	Real-world geographic location or GPS coordinates	Double
		Remarks	Any other information	text

## Annex 10: List of data layers and Mapping tags

S.N.	Data Layer		Key	Value
1	Road Network	a	highway	path
		b	junction	yes
		c	surface	ground, paved, rock, snow, grass, unpaved, paving_stones
		d	highway	steps
		e	symbol	Eg. blue white in case of Mardi Himal Trek
		f	sac_scale	hiking,mountain_hiking,demanding_mountain_hiking,alpine_hiking,demanding_alpine_hiking,difficult_alpine_hiking
		g	highway	rest_area
2	Bridge	a	bridge	yes
		b	bridge:structure	truss, simple-suspension, simple-wodden, log
		c	layer	1
3	River	a	waterway	river
		b	waterway	stream
		c	waterway	canal
		d	waterway	riverbank
		e	intermittent	yes
		f	ford	yes
		g	ford	stepping_stones
4	Health and Wash Facilities	a	amenity	hospital
		b	amenity	health_post
		c	amenity	pharmacy
		d	amenity	clinic
		e	amenity	drinking_water
		f	amenity	water_point
		g	amenity	pharmacy
		h	amenity	waste_basket
		i	amenity	toilets
		j	amenity	police
		k	healthcare	birthing_centre
5	Community Space	a	leisure	park
		b	leisure	playground
		c	leisure	garden
		d	leisure	sports_centre
		e	landuse	meadow
		f	landuse	recreation_ground
6	Business Centre	a	amenity	marketplace
		b	amenity	restaurant
		c	shop	convenience
		d	tourism	hotel
		e	shop	tailor

		f	shop	stationary
		g	shop	electronics
		h	shop	electrical
		i	shop	clothes
		j	shop	houseware
		k	shop	jwellery
		l	industrial	factory
		m	product	herbal medicine
		n	landuse	plant_nursery
7	<b>Constraints</b>	a	narrow	yes
		b	width	2,3
		c	incline	up,down, 0-100%
		d	barrier	yes
		e	barrier	vegetation
8	<b>Hazards</b>	a	hazard_prone	yes
		b	hazard_type	avalanche
		c	hazard_type	flood
		d	hazard_type	landslide
		e	landslide	mud_slide
		f	landslide	rock_fall
		g	natural	scree
9	<b>Financial Institutions</b>	a	amenity	bank
		b	amenity	atm
		c	office	insurance
		d	amenity	money_transfer
10	<b>Utility Infrastructure</b>	a	amenity	toilets
		b	fee	yes, no
		c	amenity	shelter
		d	amenity	drinking_water
		e	amenity	fuel
		f	office	telecommunication
		g	man_made	watermill
		h	man_made	communications_tower
		i	communication:mobile_phone	yes
		j	communication:radio	
		k	amenity	studio
		l	studio	television, radio,video
		m	power	generator
		n	generator:source	hydro,solar
		o	generator:method	water-storage, water-pumped-storage, run-of-the-river,photovoltaic
		p	generator:output:electricity	yes, x W, x MW
		q	service	repair
		r	amenity	bench
		s	material	stone
		t	seats	5

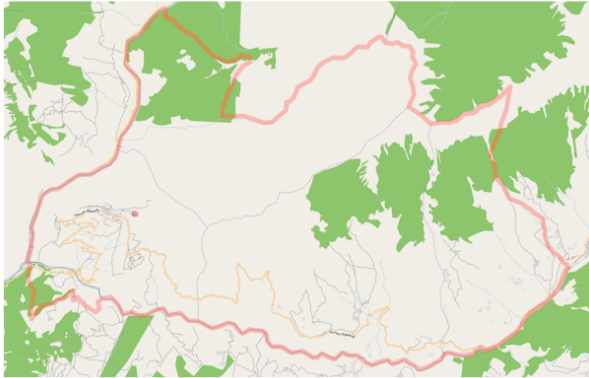
		u	shop	car_repair,
11	Settlements	a	place	town
		b	place	village
		c	place	hamlet
		d	place	isolated_dwelling
		e	population	
		f	households	
12	Education Infrastructure	a	amenity	school
		b	student:count	300
		c	amenity	college
13	Geographic Features	a	mountain_pass	yes
		b	natural	water
		c	natural	tree
		d	natural	wood
		e	natural	scrub
		f	natural	tree_row
		g	natural	peak
		h	natural	ridge
		i	natural	cliff
		j	natural	bare_rock
		k	natural	cave_entrance
		l	landuse	farmland
		m	ele	x m
		n	landuse	meadow
14	Religious Places	a	amenity	place_of_worship
		b	religion	hindu, muslim, christian, buddhist
		c	building	temple, mosque, church, shrine
15	Government Offices	a	office	government
		b	government	administrative
		c	government	tax
		d	government	social_services
		e	government	prosecutor
		f	government	cadaster
		g	police	checkpoint
		h	police	traffic_police
		i	amenity	police
		j	police	offices
		k	amenity	prison
		l	amenity	post_office
16	Accessibility and Emergency Logistics	a	amenity	shelter
		b	man_made	storage_tank
		c	content	water
		d	aeroway	helipad
		e	aeroway	aerodrome
		f	aeroway	runway

17	Tourism	a	tourism	guest_house
		b	guest_house	agrotourism
		c	tourism	hotel
		d	capacity	
		e	room	
		f	beds	
		g	tourism	camp_site
		h	tourism	museum
		i	toursim	gallery
		j	tourism	viewpoint
18	Others	a	name	
		b	name:en	
		c	name:np	
		d	source	yil2020
		e	width	x
		f	length	x
		g	height	x
		h	ele	x m
		i	description	
		j	condition	good, fair, poor, etc.
		k	abandoned	yes
		l	disused	yes
		m	temporary	yes
		n	amenity	animal_shelter

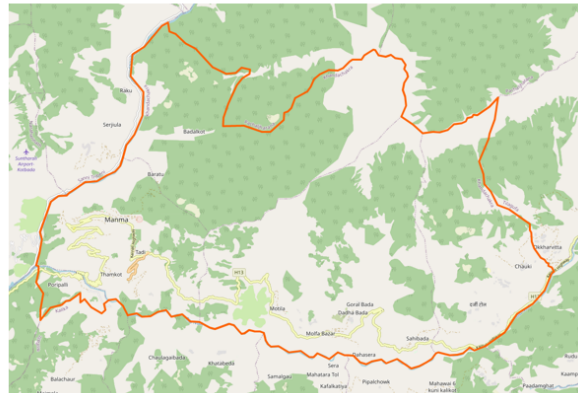
## Annex 11: Screen shots of OpenStreetMap

Khandachakra Municipality, Kalikot

Feb 2020



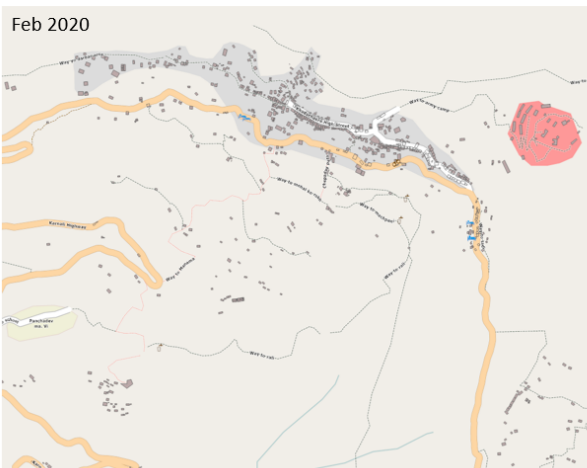
Apr 2021



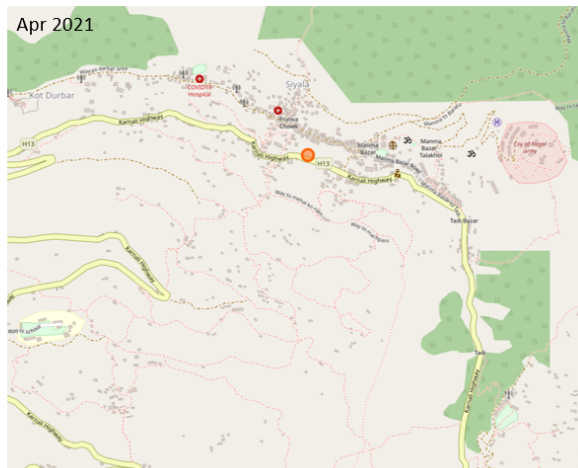
**Before and After OSM mapping of Khandachakra Municipality**

Manma, Khandachakra Municipality, Kalikot

Feb 2020



Apr 2021



**Before and After OSM mapping of Manma, Kalikot**

## Annex 12: Geographic Coordinates

### 12.1 Education Infrastructures

<i>S.N.</i>	<i>Name of Education Institution</i>	<i>Level</i>	<i>Municipality</i>	<i>Ward</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Elevation (m)</i>
1	Shree Ganesh Primary School	Primary	Palata	1	29.349897	81.760329	1860.00
2	Shree Ganesh Primary School	Primary	Palata	1	29.350631	81.768598	2011.84
3	Deutibaje Primary	Primary	Palata	2	29.326928	81.79102	1210.09
4	Jangraa Primary School	Primary	Palata	8	29.295575	81.785714	1836.31
5	Dude Sillo Basic School	Primary	Palata	8	29.2969	81.783584	1697.29
6	Saraswati Primary School	Primary	Palata	9	29.304063	81.752229	997.432
7	Kaalesillo Primary School	Primary	Pachaljharana	5	29.27463	81.7679	1965.91
8	Nabina Primary School	Primary	Pachaljharana	5	29.277901	81.762807	1776.42
9	Bidhyajyoti Primary School	Primary	Pachaljharana	3	29.253999	81.722421	1952.23
10	Balbikas School	Kindergarten	Palata	1	29.339538	81.771546	1958.74
11	Shree Kalika Secondary	Secondary	Palata	1	29.357824	81.760303	1673.68
12	Panchakalika Secondary School	Secondary	Pachaljharana	5	29.285589	81.759488	1916.51
13	Laliguras Secondary School	Secondary	Pachaljharana	1	29.226105	81.668394	1173.39
14	Sarasati School	Primary	Palata	1	29.34073	81.775677	2096.30
15	Kalika School	Secondary	Palata	1	29.340342	81.775545	2094.82
16	Karnali School	Primary	Palata	5	29.348076	81.815397	2166.04
17	Parauti School	Primary	Palata	7	29.305751	81.785062	2001.99
18	Ujala Primary School	Primary	Palata	8	29.301276	81.784241	1852.76
19	Kalasa Primary School	Primary	Palata	8	29.295232	81.78655	1840.84
20	Lakhanbada School	Primary	Palata	9	29.296766	81.752188	1042.25
21	Chamatkaar School	Primary	Pachaljharana	5	29.276081	81.765638	2000.50
22	Himala Primary School	Primary	Pachaljharana	4	29.256352	81.728929	2083.32
23	Janjoti Besi School	Primary	Pachaljharana	3	29.252329	81.726686	1971.48
24	Janija School	Primary	Pachaljharana	3	29.250303	81.72628	1814.96

25	Saraswati Besi School	Primary	Pachaljharana	1	29.228559	81.674825	1366.56
26	Aaadar Primary School	Primary	Pachaljharana	3	29.248294	81.713004	1670.99
27	Naumule School	Primary	Pachaljharana	1	29.232789	81.67688	1355.39
28	Kalika Besi School	Primary	Pachaljharana	1	29.233729	81.675983	1233.89
29	Daulaga Prammala School	Primary	Palata	3	29.358613	81.797572	1964.35
30	Chutari Primary School	Primary	Palata	5	29.350347	81.827064	2176.22
31	Deuli Besi School	Primary	Palata	4	29.360356	81.83971	1797.69
32	Shree Bal Mamata Basic School	Primary	Naraharinath	8	29.16098	81.55143	1512
33	Modern model residential School	Secondary	Naraharinath	8	29.16148	81.54816	1585
34	Shree Jana Parbat Secondary School	Secondary	Naraharinath	8	29.15814	81.54965	1666
35	Shree Jana Jagarti Basic School	Primary	Naraharinath	9	29.15728	81.54558	1774
36	Shree Rupadevi Secondary School	Secondary	Naraharinath	8	29.16135	81.54456	1624
37	Janajagaryan Basic School	Primary	Naraharinath	9	29.16477	81.54279	1456
38	Mangala Shanti Secondary School	Secondary	Naraharinath	8	29.16497	81.55023	1421
39	Nava Jyoti Bakbikas Basic School	Primary	Naraharinath	8	29.16711	81.55067	1339
40	Nanda Devi Secondary School	Secondary	Naraharinath	6	29.17669	81.55039	1526
41	Shree Shanti Secondary School	Secondary	Naraharinath	6	29.18771	81.54335	1672
42	Shree Dipendranepal Rastya Basic School	Primary	Naraharinath	4	29.20077	81.5374	1789
43	Jamara Basic School	Primary	Naraharinath	4	29.21229	81.53642	1860
44	Nanda Devi Basic School	Primary	Naraharinath	5	29.22072	81.53699	1808
45	Shree Janata Secondary School	Secondary	Naraharinath	5	29.22663	81.54363	1954
46	Shree Shishu Kalyan Basic School	Primary	Naraharinath	5	29.23411	81.55097	1974
47	Shree Ramchandra Basic School	Primary	Naraharinath	4	29.21501	81.54826	1990
48	Shree Shanti Basic School	Primary	Naraharinath	4	29.21553	81.5454	1843
49	Shree Bishowkuna Secondary School	Secondary	Naraharinath	4	29.20632	81.54858	1879
50	Shree Nilkantha Basic School	Primary	Naraharinath	4	29.20424	81.55319	2060
51	Shree Kalika Basic School	Primary	Naraharinath	3	29.19616	81.55497	1839

52	Shree Janata Basic School	Primary	Naraharinath	3	29.19668	81.54874	1595
53	Rama Secondary School	Secondary	Naraharinath	3	29.19281	81.56001	1754
54	Rupadevi Basic School	Primary	Naraharinath	3	29.18803	81.56214	1786
55	Punarkhet Basic School	Primary	Naraharinath	3	29.18605	81.55923	1666
56	Shree Chauthikot Basic School	Primary	Naraharinath	2	29.17988	81.56715	1806
57	Shree Nandadevi Bhaumukhi Campus	College	Naraharinath	2	29.17994	81.56932	1862
58	Shree Sarswati Basic School	Primary	Naraharinath	2	29.17725	81.57072	1898
59	Shree Shanti Basic School	Primary	Naraharinath	1	29.16736	81.57671	2017
60	Shree Nandadevi Secondary School	Secondary	Naraharinath	1	29.16749	81.57213	1876
61	Shree Nawadev Basic School	Primary	Naraharinath	1	29.17072	81.56711	1745
62	Shree Ambikadevi Basic School	Primary	Sanni Tribeni	1	29.16881	81.57598	1392
63	Lusha School	Primary	Sanni Tribeni	1	29.16975	81.60169	1219
64	Shree Bhanubhakta Basic School	Primary	Sanni Tribeni	1	29.17275	81.60413	1112
65	Shree Shankhar Secondary School	Secondary	Sanni Tribeni	2	29.18091	81.60687	1194
66	Shree Suryajyoti Basic School	Primary	Sanni Tribeni	2	29.1907	81.61214	1075
67	Masta Sarswati Secondary School	Primary	Sanni Tribeni	2	29.18881	81.60646	1481
68	Naina School	Primary	Sanni Tribeni	2	29.20196	81.59861	1750
69	Shree Dulya Balbikash	Kindergarten	Sanni Tribeni	3	29.2119	81.60538	1801
70	Shree Bidhya Jyoti Secondary School	Secondary	Sanni Tribeni	3	29.21829	81.61552	1424
71	Shree Dhalpura Mandal Basic School	Primary	Sanni Tribeni	3	29.2178	81.62158	1321
72	Shree Kalasilla Basic School	Primary	Sanni Tribeni	4	29.2274	81.61479	1348
73	Shree Janajyoti Secondary School	Primary	Sanni Tribeni	4	29.23235	81.61354	1255
74	Shree Malika Basic School	Primary	Sanni Tribeni	5	29.23575	81.60221	1738
75	Shree Shantikot Basic School	Primary	Sanni Tribeni	5	29.2376	81.59911	1838
76	Shree Kalika Secondary School	Secondary	Sanni Tribeni	4	29.23751	81.60907	1482
77	Shree Panchadewal Secondary School	Secondary	Sanni Tribeni	5	29.24306	81.6055	1672
78	Shree Janachetana Bahumukhi Campus	College	Sanni Tribeni	5	29.24334	81.60414	1699

79	Shree Governer Basic School	Primary	Sanni Tribeni	6	29.25863	81.59009	1802
80	Shree Sarswati Basic School	Primary	Sanni Tribeni	6	29.2614	81.59311	1683
81	Shree Mahadev Basic School	Primary	Sanni Tribeni	6	29.26659	81.59549	1497
82	Shree Gyanjyoti Basic School	Primary	Sanni Tribeni	9	29.29129	81.58765	1929
83	Shree Danfe Secondary School	Secondary	Sanni Tribeni	9	29.29176	81.59353	2062
84	Shree Mahadev Basic School	Primary	Sanni Tribeni	9	29.29187	81.59653	2174
85	Raskot Sipkhana	Primary	Sanni Tribeni	7	29.27946	81.6086	2161
86	Himalaya Basic School	Primary	Sanni Tribeni	7	29.27973	81.60283	2055
87	Shree Thinghali Devi Basic School	Primary	Sanni Tribeni	7	29.2702	81.60684	1848
88	Shree BaraRrukhs Basic School	Primary	Sanni Tribeni	5	29.24723	81.60916	1582
89	Shree Khapar Masta Basic School	Primary	Sanni Tribeni	5	29.24156	81.61125	1464
90	Shree Mahadev Basic School	Primary	Khandachakra	1	29.151585	81.607614	1758.01
91	Shree Balbikas Boarding School	Secondary	Khandachakra	1	29.150253	81.609349	1711.93
92	Shree Tilakamali Secondary School	Secondary	Khandachakra	3	29.142312	81.616135	1891.80
93	Shree Janajiban Secondary School	Secondary	Khandachakra	3	29.133963	81.615112	1642.95
94	Shree Bijasori Basic School	Primary	Khandachakra	9	29.136985	81.755585	2120.22
95	Shree Janajyoti Secondary School	Secondary	Khandachakra	9	29.134557	81.743177	2226.36
96	Shree Pragatisil Basic School	Primary	Khandachakra	8	29.131085	81.7493	2102.86
97	Shree Lingasaini Secondary School	Secondary	Khandachakra	8	29.118832	81.738261	1914.69
98	WFP Funded School	Primary	Khandachakra	7	29.110693	81.714385	1600.56
99	Shree Kalika Secondary School	Secondary	Khandachakra	7	29.108773	81.716819	1465.24
100	Shree Chandradev Basic School	Primary	Khandachakra	5	29.11502	81.67353	1622
101	Shree Chulimalika Secondary School	Secondary	Khandachakra	5	29.12119	81.67038	1687
102	ECD School	Kindergarten	Khandachakra	5	29.12126	81.66649	1609
103	Shree Nainaldev Basic School	Primary	Khandachakra	5	29.11965	81.66631	1529
104	Golden Future Academy	Primary	Khandachakra	5	29.11991	81.66563	1532
105	Shree DudheShilla Basic School	Primary	Khandachakra	6	29.11916	81.69268	1757

106	Shree Sharaswati Secondary School	Secondary	Khandachakra	6	29.12418	81.69757	1825
107	Shree Bhawani Basic School	Primary	Khandachakra	6	29.11779	81.69363	1722
108	Shree Bhimhari Basic School	Primary	Khandachakra	6	29.10818	81.69731	1394
109	Shree Janagagtri ABasic	Primary	Shubha Kalika	7	29.10315	81.68655	1415
110	Shree Mahadev Ni.Mavi	Secondary	Shubha Kalika	7	29.096848	81.683478	1661.780
111	Lalighuras Mahadebada	Kindergarten	Shubha Kalika	7	29.100377	81.681957	1628.916
112	Shree Panchakalika Secondary School	Secondary	Shubha Kalika	7	29.100854	81.686386	1526.591
113	Nainaldev ABasic School	Primary	Shubha Kalika	7	29.102089	81.681386	1545.281
114	Dahala Aavasiya School	Primary	Shubha Kalika	6	29.079196	81.658453	1654.804
115	Shree Chandrasurya Secondary School	Secondary	Shubha Kalika	6	29.085357	81.651138	1767.506
116	Dahala Secondary School	Secondary	Shubha Kalika	5	29.106867	81.652116	1608.277
117	Shree Mahadev Secondary School	Secondary	Shubha Kalika	5	29.109323	81.630041	1625.200
118	Shree Bhawani ABasic	Primary	Shubha Kalika	5	29.106968	81.619458	1659.567
119	Janauthan Balbikas Kendra	Kindergarten	Shubha Kalika	3	29.0874	81.588188	1736.491
120	Shree Ajmare Bhagawati	Primary	Shubha Kalika	1	29.086427	81.580028	2017.273
121	Shree Janajyoti Secondary School	Secondary	Shubha Kalika	3	29.095022	81.583122	1895.203
122	Kalika Secondary School	Secondary	Shubha Kalika	3	29.099618	81.588019	1846.882
123	Nainaldev Gyan Kendra	Primary	Shubha Kalika	2	29.105486	81.593933	1804.992
124	Shree Bhairab Prathamik	Primary	Shubha Kalika	2	29.112904	81.599671	1676.659
125	Janata Secondary School	Secondary	Shubha Kalika	1	29.106054	81.556751	1716.666
126	Shree Nainaldev Basic School	Primary	Khandachakra	2	29.122865	81.588582	1562.368
127	Shree Saldada Basic School	Primary	Khandachakra	2	29.12978	81.586154	1187.089
128	Shree Saldada Basic School	Primary	Khandachakra	4	29.12684	81.616779	1321.633
129	Shree Nabajyoti Basic School	Primary	Khandachakra	4	29.130602	81.613513	1558.328
130	Shree Chinari Basic School	Primary	Khandachakra	2	29.145427	81.605975	1381.75
131	Shree Panchadev Secondary School	Secondary	Khandachakra	2	29.144902	81.599669	1307.5979
132	Shree Bhawani Basic School	Primary	Khandachakra	2	29.139843	81.603482	1112.049

133	Shree Janachetana Basic School	Primary	Khandachakra	2	29.140027	81.596785	1087.463379
134	Shree Chulimalika Secondary School	Secondary	Khandachakra	11	29.176004	81.636078	1215.71814
135	Shree Karnali Secondary School	Secondary	Khandachakra	11	29.171252	81.614582	876.540283
136	Shree Nainaldev Basic School	Primary	Khandachakra	1	29.160499	81.612909	1220.062622
137	Shree Mangla Devi School	Kindergarten	Raskot	8	29.238781	81.659193	1376
138	Dungri Danda Secondary School	Secondary	Raskot	8	29.242915	81.662273	1594
139	Phukot School	Primary	Raskot	8	29.244627	81.664178	1614
140	Shree Pingala Devi School	Primary	Raskot	9	29.250413	81.669325	1702
141	Shree NavaJyoti Bal Bikash Kendra	Kindergarten	Raskot	9	29.251462	81.660239	1792
142	CTEVT College	College	Raskot	7	29.243039	81.645697	1869
143	Nava Prabhat English Boarding School	Secondary	Raskot	5	29.242206	81.642751	1863
144	Shree Badimalika Uchha Secondary School	Secondary	Raskot	5	29.242364	81.642212	1864
145	Shree Pancha Basic School	Primary	Raskot	7	29.234056	81.639602	1539
146	Shree Sima masta Basic School	Primary	Raskot	6	29.244237	81.628757	1487
147	Shree Dudheshilla Basic School	Primary	Raskot	2	29.244731	81.623159	1434
148	Shree Kalika Secondary School	Secondary	Raskot	6	29.239378	81.633164	1551
149	Shree Matribhumi Education Academy	Primary	Raskot	3	29.25397	81.637612	1859
150	Shree Malika Basic School	Primary	Raskot	3	29.254309	81.635141	1876
151	Moti Ram Secondary School	Secondary	Raskot	1	29.258541	81.621467	1834
152	Shree Sundar Basic School	Primary	Raskot	1	29.261299	81.61262	1820
153	Shree Ramal Masta Prathamik Bidhayalaya	Primary	Raskot	1	29.267257	81.614266	2028
154	Laharela School	Primary	Raskot	1	29.260632	81.609958	1734
155	Shree Laliguras Basic School	Primary	Raskot	1	29.257631	81.614486	1706
156	Shree Janaprakash Basic School	Primary	Raskot	2	29.253678	81.622435	1657
157	Bal Sikhya	Kindergarten	Raskot	3	29.256021	81.635296	1942
158	Shree Ramalmasto Primary School	Primary	Raskot	5	29.253037	81.640528	1900

159	Shree Karnali Nimna Secondary School	Primary	Pachaljharana	9	29.260305	81.679661	1651
160	Goti School	Primary	Pachaljharana	8	29.280638	81.70566	1492
161	Shree Vidyadevi Seondary School	Secondary	Pachaljharana	8	29.283604	81.72001	1553
162	Shree Saraswoti Secondary School	Secondary	Pachaljharana	8	29.28631	81.71478	1714
163	Pingala English Boarding School	Secondary	Pachaljharana	8	29.288349	81.710771	1860
164	Shree Kalika Devi Basic School	Primary	Pachaljharana	8	29.296147	81.71885	1982
165	Shree Pungeli Devi Secondary School	Secondary	Pachaljharana	7	29.314362	81.73125	2199
166	Shree Janapriya Basic Bidhayala	Primary	Pachaljharana	6	29.324969	81.723101	1991
167	Shree Kalika Devi Basic Bidhayala	Primary	Pachaljharana	7	29.312831	81.73924	1872
168	Shree Chulimalika Prathamik School	Primary	Pachaljharana	4	29.269365	81.711984	942
169	Shree Himnadi Basic Biidhyalaya	Primary	Raskot	6	29.221313	81.639356	910
170	Janata Basic School	Primary	Tilagufa	1	29.18884	81.894038	2224.64
171	Saraswati Basic School	Primary	Tilagufa	9	29.15033	81.835142	2260.96
172	Shree Deutimaadu Basic School	Primary	Tilagufa	7	29.158499	81.787149	2276.79
173	Satyadevi Primary School	Primary	Tilagufa	6	29.136172	81.814333	2019.70
174	Kalasa Basic School	Primary	Tilagufa	8	29.154873	81.774138	2214.47
175	Shree Tirbeni Secondary School	Secondary	Mahawai	3	29.056374	81.756229	2265.52
176	Shree Aadarsa Secondary School	Secondary	Mahawai	5	29.102199	81.708898	1394.04
177	Kalika Child Development Center	Kindergarten	Tilagufa	6	29.165452	81.827275	2095.13
178	Ekata Child Development Center	Kindergarten	Tilagufa	6	29.164915	81.822442	2149.81
179	Shree Himalaya Secondary School	Secondary	Mahawai	3	29.065181	81.752864	2009.85
180	Shree Tila Basic School	Primary	Mahawai	2	29.095148	81.758155	1550.57
181	Durga Secondary School	Secondary	Tilagufa	2	29.180883	81.896148	2259.54
182	Kalika Secondary School	Secondary	Tilagufa	6	29.164689	81.829975	1986.94
183	Gambira Primary School	Primary	Tilagufa	3	29.18132	81.871386	2423.51
184	Shree Daphe School	Secondary	Mahawai	2	29.069257	81.745958	2042.68
185	Laliguras School	Secondary	Mahawai	4	29.060801	81.742169	2175.57

186	Janasewa Basic School	Primary	Tilagufa	2	29.179432	81.884378	2144.198
187	Sangin School	Secondary	Mahawai	4	29.061892	81.7512	2065.994
188	Nainaldeb Secondary School	Secondary	Tilagufa	8	29.141687	81.764526	1953.772
189	Mahadeb Basic School	Primary	Tilagufa	7	29.196743	81.911233	2077.771
190	School	Secondary	Tilagufa	9	29.132823	81.82451	1983.153
191	Shree Tara Tribeni Child Development	Kindergarten	Tilagufa	8	29.146461	81.775424	1614.753
192	Satyadevi Secondary School	Secondary	Tilagufa	6	29.135099	81.804559	2053.595
193	Malika Secondary School	Secondary	Tilagufa	1	29.193591	81.900111	2343.995
194	Kalika Higher Secondary School	Higher Secondary	Tilagufa	7	29.154467	81.7833	2132.294
195	Kalika Basic School	Primary	Tilagufa	9	29.113826	81.801852	2177.623
196	Jaalpadebi Child Development Center	Kindergarten	Tilagufa	4	29.163567	81.848468	2085.945
197	Laliguraas Secondary School	Secondary	Tilagufa	5	29.167226	81.832237	2167.707
198	Mahadeb Secondary School	Secondary	Tilagufa	3	29.183356	81.868294	2540.812
199	Jagannath Secondary School	Secondary	Tilagufa	11	29.100574	81.773846	1814.409
200	Shree Jywaala Basic School	Primary	Tilagufa	6	29.155987	81.823879	1882.874
201	Hernemaadu Basic School	Primary	Tilagufa	8	29.145019	81.762597	2158.788
202	Saraswati Basic School	Primary	Tilagufa	8	29.138302	81.765698	1768.080
203	Kaalika Secondary School	Secondary	Tilagufa	4	29.167302	81.862737	2136.562
204	Janasewa Basic School	Primary	Tilagufa	2	29.177814	81.88248	2094.835
205	Mahadeba Secondary School	Secondary	Tilagufa	10	29.110056	81.832867	2621.303
206	Rastriya Secondary School	Secondary	Tilagufa	11	29.104696	81.770774	2061.448
207	Saraswati Basic School	Primary	Tilagufa	11	29.108176	81.77506	2094.693
208	School	Secondary	Tilagufa	11	29.108675	81.781991	2139.958
209	Sivalaya Secondary School	Secondary	Tilagufa	11	29.112164	81.793805	2144.514
210	Chandaadbi Secondary School	Secondary	Mahawai	6	29.097335	81.728435	1715.874
211	Mahadev Secondary School	Secondary	Tilagufa	3	29.186762	81.874074	2488.263
212	Janata Primary School	Primary	Mahawai	2	29.07528	81.752148	1872.942

213	Nargasanti Primary School	Primary	Mahawai	7	29.100898	81.741501	1775.089
214	Shree Deb Secondary School	Secondary	Mahawai	2	29.088827	81.755907	1779.099
215	Shree Ram Secondary School	Secondary	Mahawai	7	29.098525	81.742591	1813.886
216	Kalika Higher Secondary School	Higher Secondary	Mahawai	5	29.098412	81.701939	1604.733
217	Kalika Primary School	Primary	Mahawai	5	29.099299	81.702293	1555.567
218	Kalika Secondary School	Secondary	Mahawai	5	29.098537	81.701734	1598.590
219	Mahawei Basic School	Primary	Mahawai	6	29.101047	81.72367	1498.410
220	Pancha Dewal Primary School	Primary	Mahawai	5	29.095465	81.701175	1737.671
221	Pancha Dewal Primary School	Primary	Mahawai	5	29.095359	81.701223	1736.232
222	School For Differently Abled (Deaf Students)	Secondary	Mahawai	5	29.099354	81.702577	1556.416

## 12.2 Health Amenities

<i>Sn</i>	<i>Health Facility</i>	<i>Name</i>	<i>Municipality</i>	<i>Ward</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Elevation</i>
1	Health Post	Health Unit Center	Tilagufa	2	29.179174	81.8947	2303.280
2	Health Post	Health Unit	Tilagufa	4	29.165743	81.869503	2035.917
3	Medical Hall	Medical Hall	Tilagufa	1	29.197412	81.909231	2027.537
4	Health Post	Health Unit	Tilagufa	1	29.19144	81.898665	2279.442
5	Health Post	Livestock Services	Tilagufa	6	29.143316	81.821828	1792.172
6	Health Post	Basic Health Post	Tilagufa	6	29.157056	81.824524	1857.483
7	Health Post	Basic Health Post	Tilagufa	8	29.141722	81.765599	1916.199
8	Health Post	Basic Health Post	Tilagufa	9	29.112572	81.795626	2165.769
9	Health Post	Basic Health Post	Tilagufa	10	29.110318	81.829661	2641.787
10	Health Post	Daadakhala Health Post	Mahawai	2	29.067921	81.747792	1912.115
11	Health Post	Pipal Chowk Health Post	Mahawai	5	29.099175	81.701795	1566.198
12	Health Post	Kuni Health Post	Mahawai	6	29.096348	81.72096	1702.461
13	Health Post	Basic Health Post	Tilagufa	7	29.153835	81.779686	2146.072
14	Health Post	Health Unit Center	Tilagufa	5	29.163545	81.830037	1975.068
15	Health Post	Health Unit	Palata	1	29.358186	81.76146	1680.313

16	Health Post	Health Unit	Palata	1	29.349002	81.760618	1878.834
17	Health Post	Palata Health Post	Palata	2	29.343842	81.776261	2149.363
18	Health Post	Health Unit	Palata	4	29.352074	81.806703	2225.755
19	Health Post	Khaina Health Post	Palata	5	29.344505	81.815061	2087.125
20	Health Post	Dainikar Health Post	Palata	7	29.325205	81.797546	1521.612
21	Health Post	Health Unit	Palata	8	29.301864	81.780204	1700.930
22	Health Post	Health Unit	Palata	9	29.300048	81.754699	1047.957
23	Health Post	Health Unit	Pachaljharana	2	29.23407	81.67427	1230.254
24	Health Post	Health Unit	Pachaljharana	1	29.228238	81.67633	1303.625
25	Hospital	Hospital	Pachaljharana	5	29.285885	81.753419	1902.659
26	Health Post	Palata Health Post	Palata	5	29.342607	81.823427	2129.971
27	Health Post	Ukhadi Health Post	Palata	5	29.358375	81.835503	1965.334
28	Health Post	Basic Health Post	Naraharinath	8	29.1619	81.548	1569
29	Health Post	Basic Health Post	Naraharinath	9	29.16052	81.54298	1648
30	Health Post	Basic Health Post	Naraharinath	6	29.18827	81.54303	1675
31	Health Post	Basic Health Post	Naraharinath	4	29.21215	81.53646	1857
32	Health Post	Basic Health Post	Naraharinath	5	29.22255	81.5485	1959
33	Health Post	Basic Health Post	Naraharinath	4	29.21577	81.54441	1814
34	Health Post	Basic Health Post	Naraharinath	4	29.21576	81.5442	1801
35	Health Post	Basic Health Post	Naraharinath	3	29.19453	81.55346	1732
36	Health Post	Basic Health Post	Naraharinath	3	29.19364	81.55678	1728
37	Health Post	Basic Health Post	Naraharinath	2	29.18555	81.5635	1767
38	Health Post	Basic Health Post	Naraharinath	1	29.17192	81.56877	1836
39	Health Post	Basic Health Post	Sanni Tribeni	1	29.16845	81.59544	1411
40	Health Post	Basic Health Post	Sanni Tribeni	2	29.18074	81.60698	1196
41	Health Post	Basic Health Post	Pachaljharana	1	29.21011	81.66705	1771
42	Health Post	Basic Health Post	Sanni Tribeni	3	29.21984	81.61999	1477
43	Health Post	Basic Health Post	Sanni Tribeni	5	29.23791	81.6012	1762
44	Health Post	Livestock Services	Sanni Tribeni	5	29.24236	81.60795	1576
45	Hospital	COVID-19 Isolation Hospital	Sanni Tribeni	5	29.24204	81.59997	1725
46	Health Post	Basic Health Post	Sanni Tribeni	6	29.26191	81.59236	1730
47	Health Post	Basic Health Post	Sanni Tribeni	9	29.29129	81.59193	2012

48	Health Post	Basic Health Post	Sanni Tribeni	9	29.29459	81.59564	2203
49	Health Post	Basic Health Post	Sanni Tribeni	7	29.27105	81.60737	1887
50	Hospital	COVID-19 Hospital	Khandachakra	1	29.152749	81.604621	1757.825
51	Hospital	District Eye Hospital	Khandachakra	1	29.151791	81.607536	1770.471
52	Health Post	Manma Livestock Services	Khandachakra	1	29.150251	81.610336	1739.408
53	Health Post	Tadi Health Post	Khandachakra	3	29.139877	81.61478	1811.169
54	Health Post	Tadi Livestock Services	Khandachakra	3	29.139763	81.614804	1811.627
55	Medical Hall	Malla Medical Hall	Khandachakra	8	29.116429	81.750066	1349.165
56	Medical Hall	Mahadev Medical Hall	Khandachakra	8	29.12426	81.758883	1434.271
57	Health Post	Chauki Health Post	Khandachakra	9	29.138237	81.756812	2090.520
58	Health Post	Pakha Health Post	Khandachakra	8	29.126994	81.74307	2122.464
59	Health Post	Darji Tol Health Post	Khandachakra	8	29.118834	81.73802	1913.691
60	Health Post	Sahibada Health Unit	Khandachakra	7	29.11046	81.71643	1538
61	Health Post	Nare Health Post (Birthing Center)	Khandachakra	6	29.11486	81.68291	1636
62	Health Post	Dadha Bada Health Post	Khandachakra	6	29.11794	81.69447	1689
63	Pharmacy	Pharmacy	Suvakalika	7	29.101153	81.684448	1511.224
64	Health Post	Basic Health Unit	Suvakalika	7	29.101709	81.686867	1482.980
65	Health Post	Basic Health Post	Suvakalika	8	29.103685	81.674892	1585.160
66	Health Post	Basic Health Post	Suvakalika	6	29.085277	81.651563	1743.554
67	Medical Hall	Kamal Medical Hall	Suvakalika	5	29.105802	81.65154	1640.3661
68	Health Post	Basic Health Post	Suvakalika	5	29.1049	81.647051	1638.568
69	Health Post	Basic Health Post	Suvakalika	5	29.10701	81.62736	1609.176
70	Health Post	Basic Health Post	Suvakalika	1	29.09162	81.579982	1953.945
71	Health Post	Basic Health Post	Suvakalika	2	29.105935	81.594055	1828.009
72	Health Post	Basic Health Post	Suvakalika	1	29.106626	81.556075	1664.722
73	Health Post	Thamkot Health Post	Khandachakra	4	29.129739	81.616568	1432.329
74	Hospital	District Hospital	Khandachakra	2	29.147328	81.592916	1492.123
75	Health Post	Badalkot Health Unit	Khandachakra	11	29.175896	81.636428	1232.987
76	Health Post	Quarantine House	Raskot	6	29.226287	81.633357	1254
77	Health Post	Health Post (Birthing Center)	Raskot	9	29.25142	81.668291	1749
78	Clinic	Badimalika Clinic	Raskot	5	29.242254	81.643004	1859
79	Hospital	Ravi Lamichhane Hospital	Raskot	3	29.247888	81.628792	1624

80	Hospital	Raskot Community Hospital	Raskot	5	29.24038	81.636202	1653
81	Health Post	Syuna Health Post	Raskot	5	29.237813	81.63712	1713
82	Medical Hall	Karnali Jana Sewa Medical Hall	Raskot	2	29.254638	81.633732	1879
83	Health Post	Health Post Sipkhana	Raskot	1	29.25889	81.620473	1842
84	Medical	Tele Medicine Center	Raskot	1	29.258834	81.620679	1841
85	Health Post	Health Post	Raskot	2	29.259032	81.632122	1980
86	Health Post	Health Post (OPD)	Raskot	5	29.25047	81.644451	1992
87	Health Post	Basic Health Post	Pachaljharana	9	29.259982	81.680936	1626
88	Health Post	Health Post	Pachaljharana	9	29.263275	81.687944	1507
89	Health Post	Health Post	Pachaljharana	8	29.281301	81.708903	1520
90	Health Post	Health Post	Pachaljharana	7	29.3182	81.724502	1901
91	Clinic	Health Clinic	Pachaljharana	7	29.314537	81.731267	2206
92	Veternary Hospital	Animal Facility Department	Pachaljharana	4	29.27645	81.72983	952
93	Medical Hall	New Prabhat Janasewa Medical Hall	Pachaljharana	4	29.276553	81.729939	952
94	Medical Hall	Riju Medical Hall	Pachaljharana	4	29.277058	81.730244	946
95	Clinic	Sanjyal Health Clinic And Medical	Pachaljharana	8	29.274677	81.726058	938
96	Clinic	Pachaljharana Medical and Clinic	Pachaljharana	8	29.271291	81.714039	938

### 12.3 Financial Institutions

<i>Sn</i>	<i>Name</i>	<i>Type</i>	<i>Municipality</i>	<i>Ward</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Elevation (m)</i>
1	Nabil Bank	Private Bank	Palata	9	29.303772	81.751467	977.016
2	NRO Laghubitta Bittyta Sanstha Limited	Micro Finance	Naraharinath	3	29.19468	81.55376	1723
3	Agriculture Development Bank	Govt Bank	Naraharinath	3	29.19374	81.55669	1733
4	IME Kumalgau	Remittance	Naraharinath	3	29.19355	81.55604	1738
5	Himchuli Sahakari Sanstha	Cooperative	Naraharinath	3	29.19351	81.5561	1739
6	Sunaulo Agriculture Sahakari Sanstha	Cooperative	Sanni Tribeni	4	29.23709	81.61006	1446
7	Sanima Bank	Private Bank	Sanni Tribeni	5	29.24562	81.60524	1677
8	Himchuli Sahakari Sanstha	Cooperative	Sanni Tribeni	5	29.24683	81.60538	1698
9	DEPROSC	Micro Finance	Khandachakra	1	29.14941	81.613342	1755.202
10	NRN Lagubitta Sastha	Micro Finance	Khandachakra	1	29.151755	81.606978	1770.288

11	Jyoti Life Insurance	Life Insurance	Khandachakra	1	29.151433	81.608007	1755.446
12	Nepal Life Insurance	Life Insurance	Khandachakra	1	29.151199	81.608356	1753.293
13	ADBL Bank	Govt Bank	Khandachakra	1	29.151124	81.608496	1750.556
14	Himchuli Kirsi Sahakari Sasta	Cooperative	Khandachakra	1	29.151121	81.608565	1749.457
15	NIC ASIA bank	Private Bank	Khandachakra	1	29.151027	81.608766	1758.898
16	Rastiya Banijaya Bank	Bank	Khandachakra	1	29.151069	81.608809	1764.419
17	Subhakamana IME	Remittance	Khandachakra	1	29.151068	81.608829	1762.172
18	Mega BANK	Private Bank	Khandachakra	1	29.150942	81.608978	1761.061
19	Global IME Bank	Private Bank	Khandachakra	1	29.150062	81.612387	1757.343
20	Ratoguras Bachat Tathaa Rin Sahakari	Cooperative	Khandachakra	1	29.149877	81.612654	1758.275
21	Karnali Yakikirt Kirsi Sahakari	Cooperative	Khandachakra	1	29.149044	81.613799	1755.172
22	Saana Kisan Sahakari Sastha	Cooperative	Khandachakra	1	29.148998	81.61393	1757.253
23	Surya Life Insurance	Life Insurance	Khandachakra	1	29.148889	81.614089	1754.969
24	Chautari Malti Kirsi Sahakari	Cooperative	Khandachakra	10	29.136199	81.754854	2100.386
25	Shree Lingasaini Sana Kisan Sastha	Cooperative	Khandachakra	8	29.131254	81.746179	2169.247
26	Dahala Pasu Tatha Kirsi Sahakari	Cooperative	Shubha Kalika	6	29.078034	81.660065	1654.551
27	Krisi Bikash Bank	Govt Bank	Shubha Kalika	5	29.10553	81.651667	1632.065
28	Himchuli Krisi Sahakari Sanstha Ltd.	Cooperative	Raskot	5	29.238921	81.637653	1757
29	Global IME Bank	Private bank	Raskot	5	29.238414	81.637159	1746
30	Simnath Agriculture Development Co-operation Ltd	Cooperative	Raskot	3	29.253996	81.635991	1864
31	Prabhu Money Transfer	IME	Raskot	1	29.25927	81.616208	1817
32	Nabil Bank	Private Bank	Pachaljharana	4	29.276709	81.729772	945
33	Remittance	Remittance	Pachaljharana	4	29.276405	81.729568	943
34	Himchuli Krishi Sahakari	Cooperative	Pachaljharana	4	29.276414	81.729468	939
35	Nepal Investment Bank Limited	Private Bank	Tilagufa	1	29.198523	81.909307	2023.096
36	Krisi Bikas Bank	Govt Bank	Tilagufa	6	29.143331	81.821809	1805.105
37	Rato Gurans Sahakari Sastha	Cooperative	Tilagufa	1	29.197656	81.909234	2033.022

## 12.4 Business Centers

<i>Sn</i>	<i>Name</i>	<i>Type of Business</i>	<i>Place</i>	<i>Municipality</i>	<i>Ward</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Elevation(m)</i>
1	Anil Hotel, Vanka	Hotel	Vanka	Pachaljarana	3	29.247325	81.712033	1730.552
2	Raduneta Market	Market	Thirpu	Palata	1	29.340496	81.775479	2093.111
3	Dusi Hotel	Hotel	Dusi	Palata	2	29.32595	81.787799	1207.278
4	Hotel	Hotel	Dusi	Palata	2	29.325959	81.787626	1220.828
5	Shahi Hotel	Hotel	Paraiuti	Palata	7	29.325205	81.790833	1170.764
6	Market	Market	Thirpu	Palata	9	29.302657	81.751596	998.0872
7	Market	Market	Thirpu	Palata	9	29.29991	81.751155	950.668
8	Malika Hotel	Hotel	Thirpu	Palata	9	29.303994	81.751046	1013.603
9	Chandrya Surya Hotel	Hotel	Manma	Khandachakra	1	29.15033	81.60802	1714
10	Dinesh Hotel	Hotel	Kalyakhola	Naraharinath	1	29.12519	81.56647	791
11	Ganesh Hotel	Hotel	Khulalu	Naraharinath	1	29.14679	81.5607	889
12	Navadev Madu Hotel	Hotel	Rupsa	Naraharinath	5	29.22632	81.54419	1978
13	Kumalgau Stationary	Stationary	Kumal Gaun	Naraharinath	3	29.19335	81.55656	1732
14	Kotbada Hotel	Hotel	Sotar Gaun	Naraharinath	1	29.17116	81.56758	1759
15	Hotel Hilsha	Hotel	Shantighar	Sanni Tribeni	4	29.21694	81.63252	896
16	Khulalu Shop	Shop	Khulalu	Naraharinath	8	29.13629	81.55838	803
17	Shop	Shop	Khulalu	Naraharinath	8	29.14098	81.5579	846
18	Ragada Bazar	Market	Ragada	Naraharinath	6	29.1706	81.55505	1143
19	Ragada Hotel	Hotel	Ragada	Naraharinath	6	29.17092	81.5555	1174
20	Dhwarana Shop	Shop	Malkot	Naraharinath	6	29.18045	81.54627	1579
21	Navadev Hotel	Hotel	Rupsa	Naraharinath	5	29.22682	81.54436	1956
22	Electronic Shop	Shop	Kumal Gaun	Naraharinath	3	29.19367	81.55675	1734
23	Shahi Hotel	Hotel	Kumal Gaun	Naraharinath	3	29.19292	81.55762	1738
24	Nandadevi Chowin Factory	Factory	Kumal Gaun	Naraharinath	3	29.18798	81.56068	1733
25	Mamita Furniture Factory	Factory	Chautha	Naraharinath	1	29.17879	81.56806	1817
26	Sumita Pasal and Hotel	Hotel	Kotbada	Naraharinath	2	29.16868	81.57787	2037
27	Batala Hotel	Hotel	Serijula	Sanni Tribeni	2	29.18082	81.60572	1237

28	Devkota Hotel	Hotel	Dadakhet	Sanni Tribeni	4	29.23248	81.61171	1319
29	Sunlight Hotel and Restaurant	Hotel	Manma	Khandachakra	1	29.15002	81.609278	1706.534
30	White Guest House	Hotel	Manma	Khandachakra	1	29.147301	81.614327	1755.610
31	Everest Hotel	Hotel	Tadi	Khandachakra	3	29.137964	81.614324	1761.908
32	Local Village Hotel	Hotel	Haudi	Suvakalika	8	29.083139	81.664638	1722.196
33	Nabin General Store	Shop	Shantighat Old Bazar	Raskot	6	29.220371	81.63136	913
34	Gau Bikas Engg & Const Service Pvt. Ltd	Engineering Consult	Koli Gau	Raskot	3	29.254078	81.635856	1866
35	Mission Agrovet Center	Shop	Sipkhana	Raskot	1	29.258896	81.621307	1861
36	Bipana Hotel	Hotel	Jarkot	Pachaljharana	4	29.276541	81.729673	941
37	Shahi Auto Parts	Shop	Jarkot	Pachaljharana	8	29.275233	81.726741	930
38	Prashant Store	Shop	Raachuli	Tilagufa	5	29.163023	81.829708	1948.846

## 12.5 Community Spaces

<i>S.N.</i>	<i>Name</i>	<i>Type</i>	<i>Municipality</i>	<i>Ward</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Elevation (m)</i>
1	Shanti Ghat	Open Space	Raskot	6	29.221203	81.631018	925
2	Shanti Ghat	Open Space	Raskot	6	29.220113	81.631604	914
3	Pogri	Open Space	Raskot	6	29.226952	81.633201	1262
4	Dungri Danda	Playground	Raskot	8	29.243504	81.662475	1598
5	Tholma	Playground	Raskot	9	29.250494	81.668876	1714
6	Phukot	Open Space	Raskot	9	29.251734	81.667442	1754
7	Gorkhali Gau	Playground	Raskot	6	29.239916	81.63289	1552
8	Ranagau	Playground	Raskot	6	29.236857	81.635396	1674
9	Hipkot	Open Space	Sanni Tribeni	7	29.277778	81.609078	2166
10	Sipti	Potential Helicopter landing zone	Raskot	4	29.277056	81.649304	2785
11	Sipti	Potential Helicopter landing zone	Raskot	4	29.280718	81.646253	2838
12	Bol Gaun	Open Space	Pachaljharana	7	29.320204	81.719629	2072
13	Jarkot	Open Space	Pachaljharana	4	29.276711	81.73002	951
14	Jarkot	Open Space	Pachaljharana	8	29.274723	81.725994	940
15	Shanti Ghat	Open Space	Sanni Tribeni	4	29.224519	81.62677	954
16	Bijaya Pur	Open Space	Raskot	5	29.242367	81.642504	1866
17	Foi Mahadev	Open Space	Tilagufa	3	29.183602	81.868432	2537
18	Raachuli	Open Space	Tilagufa	4	29.167266	81.862736	2136
19	Pipalchowk	Open Space	Mahawai	5	29.092958	81.698799	1858
20	Pipalchowk	Open Space	Mahawai	5	29.098303	81.701977	1614
21	Pipalchowk	Open Space	Mahawai	5	29.099325	81.703138	1549
22	Kuni	Open Space	Mahawai	6	29.0967	81.72096	1694
23	Kuni	Open Space	Mahawai	6	29.097353	81.72847	1719
24	Odhanku	Open Space	Mahawai	7	29.098564	81.742587	1815
25	Okkharvitta	Open Space	Tilagufa	8	29.147309	81.76281	2209
26	Chhapre	Open Space	Tilagufa	6	29.135184	81.80536	2056
27	Manma	Open Space	Khandachakra	1	29.153093	81.604432	1768
28	Manma	Open Space	Khandachakra	1	29.150527	81.611091	1769
29	Tadi	Playground	Khandachakra	3	29.142262	81.616043	1890
30	Pakha	Playground	Khandachakra	8	29.134273	81.743525	2217

31	Simkot, Pilli	Playground	Khandachakra	7	29.108671	81.71691	1460
32	Daahaa	Playground	Khandachakra	5	29.12105	81.67028	1687
33	Rarakatiya	Open Space	Shubha Kalika	5	29.10933	81.629765	1613
34	Galjina Bajthala	Open Space	Shubha Kalika	1	29.086683	81.580647	2001
35	Manma	Open Space	Khandachakra	2	29.144843	81.599168	1307
36	Badalkot	Playground	Khandachakra	11	29.176167	81.636115	1230
37	Shreekot	Open Space	Naraharinath	9	29.15757	81.54529	1763
38	Sherapata	Open Space	Naraharinath	6	29.17396	81.55277	1440
39	Chauthikot	Open Space	Naraharinath	2	29.17983	81.5691	1860
40	Chauthikot	Open Space	Naraharinath	2	29.17964	81.56992	1892
41	Sotar	Open Space	Sanni Tribeni	1	29.16816	81.59554	1400
42	Mumra	Potential Helicopter landing zone	Sanni Tribeni	9	29.29084	81.59248	2026
43	Mehelne	Open Space	Palata	5	29.349179	81.818381	2325
44	Mehelne	Open Space	Palata	5	29.344338	81.818227	2212
45	Godi	Open Space	Palata	5	29.349973	81.832048	2206
46	Tite Khole Chautaro	Resting Place	Palata	5	29.352765	81.83337	2145
47	Jaafe	Open Space	Palata	6	29.354681	81.855692	1806
48	Faagoti	Open Space	Palata	7	29.331565	81.81122	1396
49	Playground	Playground	Palata	7	29.325065	81.797035	1467
50	Phil Paruti	Open Space	Palata	8	29.307062	81.781802	2005
51	Kantubaada	Playground	Palata	9	29.302989	81.751921	1022
52	Pachaljharana	Playground	Pachaljharana	5	29.285711	81.760092	1923
53	Baachkot Chautaro	Playground	Pachaljharana	5	29.271756	81.765919	1918
54	Baachkot Chautaro	Open Space	Pachaljharana	5	29.274168	81.754147	1579
55	Khaddu	Open Space	Pachaljharana	4	29.25909	81.728413	2317
56	Siku	Open Space	Pachaljharana	2	29.244806	81.700107	1803
57	Siku	Open Space	Pachaljharana	1	29.227203	81.662307	985

## 12.6 Public Buildings

<i>Sn.</i>	<i>Name</i>	<i>Type</i>	<i>Municipality</i>	<i>Ward</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Elevation (m)</i>
1	Khadachakra Municipality, Ward-6 Office	Administrative	Khandachakra	6	29.11379	81.69841	1578
2	Khadachakra Municipality, Ward-1 Office	Administrative	Khandachakra	1	29.1502147	81.6122496	1766.011
3	District Survey Office	Government	Khandachakra	1	29.152083	81.597976	1673.004
4	District Land Revenue Office	Government	Khandachakra	1	29.152104	81.598076	1674.372
5	District Forest Office	Government	Khandachakra	1	29.1527	81.60037	1688.076
6	Kalikot District Prison	Government	Khandachakra	1	29.152801	81.601436	1717.086
7	Kalikot Community Technology Consecration	Community	Khandachakra	1	29.152813	81.603976	1755.968
8	Kabard Hall	Public	Khandachakra	1	29.152986	81.604343	1759.7
9	District Agriculture Office	Government	Khandachakra	1	29.152576	81.605479	1754.969
10	KIRDARC Nepal	NGO	Khandachakra	1	29.151638	81.607531	1755.173
11	VDSEF	NGO	Khandachakra	1	29.151223	81.60834	1755.058
12	Karnali Jaycees, Kalikot Chamber Of Commerce	Public	Khandachakra	1	29.150859	81.609342	1763.904
13	Nepal Government Employers Associatiaon	Government	Khandachakra	1	29.15084	81.609392	1763.867
14	District Police Office	Government	Khandachakra	1	29.150581	81.610654	1747.560
15	District Administration Office	Government	Khandachakra	1	29.150666	81.61074	1760.332
16	District Coordination Committee	Government	Khandachakra	1	29.150655	81.610998	1766.700
17	District Court	Government	Khandachakra	2	29.150588	81.611494	1775.439
18	Drinking Water and Energy Development	Government	Khandachakra	1	29.150925	81.611224	1756.577
19	Nepal Army	Government	Khandachakra	2	29.150565	81.614893	1830.879
20	Himalayan Development Centre	Public	Khandachakra	2	29.14954	81.613145	1757.488
21	Nepal Electricity Authority	Institutional	Khandachakra	2	29.149501	81.613478	1755.929
22	District Prosecutors Office	Government	Khandachakra	2	29.149218	81.613565	1758.490
23	Provincial Attorney General	Government	Khandachakra	1	29.149846	81.610073	1704.152
24	Provincial Secreteriat	Government	Khandachakra	1	29.149751	81.609818	1696.959
25	SOSEC Nepal	NGO	Khandachakra	2	29.14978	81.610183	1712.360
26	District Election Office	Government	Khandachakra	2	29.149569	81.610355	1713.201
27	Small and Cottage Industries Office	Government	Khandachakra	2	29.149617	81.610572	1718.379

28	Traffic Station	Government	Khandachakra	2	29.149745	81.611867	1724.431
29	Khadachakra Municipality Office	Administrative	Khandachakra	1	29.149	81.613511	1741.566
30	Khadachakra Municipality, Ward-3 Office	Administrative	Khandachakra	3	29.137503	81.61387	1770.132
31	Jana Jibika Vegetables and Fruits Group Center	Community	Khandachakra	9	29.13492	81.755161	2059.771
32	Khadachakra Municipality, Ward-10 Office	Administrative	Khandachakra	10	29.13631	81.754721	2104.120
33	Khadachakra Municipality, Ward-9 Office	Administrative	Khandachakra	9	29.130103	81.745151	2158.486
34	Police Station	Government	Khandachakra	9	29.130136	81.745194	2156.508
35	Khadachakra Municipality, Ward-8 Office	Administrative	Khandachakra	8	29.1188	81.73799	1918.052
36	Khadachakra Municipality, Ward-7 Office	Administrative	Khandachakra	7	29.109186	81.714665	1521.766
37	Khadachakra Municipality, Ward-5 Office	Administrative	Khandachakra	5	29.12132	81.66984	1684
38	Police Station	Government	Khandachakra	5	29.11372	81.68103	1630
39	Suvakalika Rural Municipality Ward-7 Office	Administrative	Suvakalika	7	29.100391	81.687758	1461
40	Kalikot Post Office	Government	Suvakalika	7	29.099206	81.688895	1446.126
41	Suvakalika Rural Municipality Ward-8 Office	Administrative	Suvakalika	8	29.100811	81.683307	1531.424
42	Suvakalika Rural Municipality Ward-6 Office	Administrative	Suvakalika	6	29.085636	81.651276	1758.996
43	Police Station	Government	Suvakalika	6	29.086574	81.649707	1826.975
44	Temporary Police Station	Government	Suvakalika	5	29.105671	81.651571	1639.758
45	Suvakalika Rural Municipality Office	Administrative	Suvakalika	5	29.106456	81.65178	1634.256
46	Suvakalika Rural Municipality Ward-4 Office	Administrative	Suvakalika	4	29.106341	81.626453	1587.090
47	Suvakalika Rural Municipality Ward-3 Office	Administrative	Suvakalika	3	29.087308	81.584186	1879.374
48	Suvakalika Rural Municipality Ward-2 Office	Administrative	Suvakalika	2	29.105754	81.594404	1817.827
49	Suvakalika Rural Municipality Ward-1 Office	Administrative	Suvakalika	1	29.104398	81.559252	1740.938
50	Khadachakra Municipality, Ward 4 Office	Administrative	Khandachakra	4	29.131684	81.612948	1622.565
51	Khadachakra Municipality, Ward 2 Office	Administrative	Khandachakra	2	29.140299	81.602542	1138.364
52	Armed Police Force	Government	Khandachakra	1	29.151693	81.600648	1649.530
53	WFP Office Kalikot	INGO	Khandachakra	1	29.150622	81.607682	1716.031

54	Khadachakra Municipality, Ward-11 Office	Administrative	Khandachakra	11	29.176019	81.636592	1235.435
55	Police Station	Government	Palata	9	29.29666	81.752602	1046.365
56	Children Development Center	Government	Tilagufa	2	29.16997	81.895082	2286.071
57	Women Development Office	Government	Tilagufa	7	29.152869	81.77657	2157.153
58	Mahawai Rural Municipality, Ward 3 Office	Administrative	Mahawai	3	29.067589	81.747591	1916.839
59	Tilagufa Municipality, Ward 2 Office	Administrative	Tilagufa	2	29.179951	81.894715	2313.764
60	Tilagufa Municipality, Ward 4 Office	Administrative	Tilagufa	4	29.166562	81.86937	2038.148
61	Tilagufa Municipality, Ward 11 Office	Administrative	Tilagufa	11	29.112614	81.793826	2144.008
62	Tilagufa Municipality, Ward 3 Office	Administrative	Tilagufa	3	29.186788	81.873313	2477.01
63	Tilagufa Municipality, Ward 8 Office	Administrative	Tilagufa	8	29.141877	81.7655	1929.916
64	Mahawai Rural Municipality, Ward 1 Office	Administrative	Mahawai	1	29.100421	81.773936	1801.851
65	Mahawai Rural Municipality, Ward 7 Office	Administrative	Mahawai	7	29.100529	81.741815	1789.574
66	Mahawai Rural Municipality, Ward 4 Office	Administrative	Mahawai	4	29.062185	81.75189	2057.449
67	Mahawai Rural Municipality, Ward 2 Office	Administrative	Mahawai	2	29.090246	81.756462	1724.236
68	Mahawai Rural Municipality, Ward 5 Office	Administrative	Mahawai	5	29.099447	81.702064	1553.486
69	Tilagufa Municipality, Ward 7 Office	Administrative	Tilagufa	7	29.154418	81.784631	2120.389
70	Tilagufa Nagarpalika Office	Administrative	Tilagufa	6	29.143642	81.822448	2102.25
71	Tilagufa Municipality, Ward 5 Office	Community	Tilagufa	5	29.162947	81.829924	1935.949
72	Post Office	Government	Tilagufa	6	29.158752	81.825188	1851.293
73	Food Co-operation	Community	Tilagufa	6	29.159664	81.825652	1846.089
74	Tilagufa Subdivision Forest Office	Government	Tilagufa	6	29.156957	81.824136	1870.271
75	Mahawai Rural Municipality Office	Administrative	Mahawai	2	29.097487	81.758628	1468.867
76	Employment Service Center	Community	Mahawai	2	29.097892	81.760998	1491.26
77	Tilagufa Municipality, Ward 10 Office	Administrative	Tilagufa	10	29.112642	81.793749	2143.404
78	Mahawai Rural Municipality, Ward 6 Office	Administrative	Mahawai	6	29.096708	81.720907	1692.225

79	Tilagufa Municipality, Ward 6 Office	Administrative	Tilagufa	6	29.14037	81.821602	1773.005
80	Odha Foundation	INGO	Mahawai	2	29.092743	81.755717	1703.291
81	Palata Rural Municipality, Ward 1 Office	Administrative	Palata	1	29.339297	81.775502	2101.603
82	Palata Rural Municipality, Ward 2 Office	Administrative	Palata	2	29.352675	81.788632	1759.556
83	Palata Rural Municipality, Ward 5 Office	Administrative	Palata	5	29.35827	81.835154	1984.008
84	Palata Rural Municipality, Ward 1 Office	Administrative	Palata	1	29.349697	81.760787	1882.641
85	Palata Rural Municipality, Ward 1 Office	Administrative	Palata	1	29.342541	81.775746	2114.761
86	Palata Rural Municipality, Ward 4 Office	Administrative	Palata	4	29.352099	81.806774	2227.018
87	Palata Rural Municipality, Ward 5 Office	Administrative	Palata	5	29.344352	81.815311	2094.277
88	Palata Rural Municipality, Ward 7 Office	Administrative	Palata	7	29.324886	81.78984	1156.35
89	Palata Rural Municipality, Ward 8 Office	Administrative	Palata	8	29.295873	81.781979	1679.656
90	Palata Rural Municipality, Ward 9 Office	Administrative	Palata	9	29.302752	81.753281	1052.61
91	Pachaljharana Rural Municipality, Ward 5 Office	Administrative	Pachaljharana	5	29.275907	81.765378	1946.238
92	Pachaljharana Rural Municipality, Ward 3 Office	Administrative	Pachaljharana	3	29.25384	81.727717	2081.303
93	Pachaljharana Rural Municipality, Ward 1 Office	Administrative	Pachaljharana	1	29.232428	81.67664	1322.279
94	Pachaljharana Rural Municipality, Ward 1 Office	Administrative	Pachaljharana	1	29.22764	81.670684	1369.301
95	Agriculture Office	Administrative	Pachaljharana	3	29.248894	81.710966	1839.976
96	Police Station	Government	Palata	9	29.29666	81.752602	1046.365
97	INF NEPAL	INGO	Naraharinath	3	29.19293	81.55978	1738
98	Water and Sanitation Consumer Fedration	Government	Naraharinath	3	29.19287	81.55997	1747
99	Rural Development Information Center	Government	Naraharinath	2	29.1878	81.56242	1786
100	Police Station	Government	Naraharinath	8	29.1292	81.56436	749
101	Police Station	Government	Sanni Tribeni	5	29.24613	81.60526	1672
102	Police Station	Government	Sanni Tribeni	7	29.26361	81.60017	1541
103	Naraharinath Rural Municipality, Ward 8 Office	Administrative	Naraharinath	8	29.16207	81.54783	1556

104	Government Building	Government	Naraharinath	9	29.159	81.54482	1697
105	Naraharinath Rural Municipality, Ward 9 Office	Administrative	Naraharinath	8	29.1612	81.54683	1594
106	Naraharinath Rural Municipality, Ward 6 Office	Administrative	Naraharinath	6	29.17655	81.55086	1521
107	Naraharinath Rural Municipality, Ward 7 Office	Administrative	Naraharinath	7	29.19622	81.52499	1714
108	Naraharinath Rural Municipality, Ward 5 Office	Administrative	Naraharinath	5	29.21888	81.53751	1857
109	Naraharinath Rural Municipality, Ward 5 Office	Administrative	Naraharinath	5	29.22676	81.54258	1938
110	Naraharinath Rural Municipality, Ward 4 Office	Administrative	Naraharinath	4	29.21836	81.5463	1852
111	Government Building	Government	Naraharinath	5	29.24533	81.54585	1860
112	Agriculture Office	Government	Naraharinath	4	29.19595	81.55476	1828
113	Naraharinath Rural Municipality, Ward 3 Office	Administrative	Naraharinath	3	29.19286	81.55727	1735
114	Naraharinath Rural Municipality Office	Administrative	Naraharinath	3	29.19208	81.55666	1690
115	Livestock Division	Government	Naraharinath	3	29.19336	81.55708	1717
116	Agriculture Division	Government	Naraharinath	3	29.19352	81.55701	1722
117	Naraharinath Rural Municipality, Ward 2 Office	Administrative	Naraharinath	2	29.18168	81.5685	1810
118	Government Building	Government	Naraharinath	2	29.17743	81.57019	1887
119	Suntharali Subdivision Forest Office	Government	Naraharinath	2	29.16814	81.57748	2026
120	Women Development Office	NGO	Naraharinath	1	29.17033	81.57022	1862
121	Post Office	Government	Naraharinath	1	29.17056	81.57001	1860
122	Naraharinath Rural Municipality, Ward 1 Office	Administrative	Naraharinath	1	29.17097	81.5676	1758
123	Sanni Tribeni Rural Municipality, Ward 1 Office	Administrative	Sanni Tribeni	1	29.17264	81.60402	1130
124	Sanni Tribeni Rural Municipality, Ward 2 Office	Administrative	Sanni Tribeni	2	29.18889	81.60558	1469
125	Sanni Tribeni Rural Municipality, Ward 3 Office	Administrative	Sanni Tribeni	3	29.21844	81.61593	1420
126	Sanni Tribeni Rural Municipality, Ward 4 Office	Administrative	Sanni Tribeni	4	29.23558	81.60245	1734
127	Sanni Tribeni Rural Municipality, Ward 5 Office	Administrative	Sanni Tribeni	5	29.24173	81.60667	1557
128	Sanni Tribeni Rural Municipality Office	Administrative	Sanni Tribeni	5	29.2435	81.60451	1687

129	Sanni Tribeni Rural Municipality, Ward 6 Office	Administrative	Sanni Tribeni	6	29.24843	81.60397	1700
130	Sanni Tribeni Rural Municipality, Ward 8 Office	Administrative	Sanni Tribeni	9	29.2907	81.59273	2027
131	Sanni Tribeni Rural Municipality, Ward 9 Office	Administrative	Sanni Tribeni	9	29.29074	81.59285	2030
132	Sanni Tribeni Rural Municipality, Ward 7 Office	Administrative	Sanni Tribeni	7	29.2695	81.60362	1836
133	NEA Office Kalikot	Institutional	Sanni Tribeni	7	29.26357	81.60097	1550
134	Kalikot Community Technology Consecration	Community	Khandachakra	1	29.152813	81.603976	1755.
135	Jana Jibika Vegetables and Fruits Group Center	Community	Khandachakra	10	29.13492	81.755161	2059
136	SAADA-Nepal	NGO	Raskot	3	29.254087	81.635468	1867
137	Nepal Redcross	NGO	Pachaljharana	4	29.276423	81.729907	949
138	Petari Water and Sanitation Office	Water and Sanitation	Pachaljharana	4	29.2764	81.729961	952
139	Police Station	Security forces	Raskot	5	29.239277	81.638297	1778
140	Police Station	Security forces	Raskot	5	29.244369	81.644073	1941
141	Police Station	Security forces	Pachaljharana	4	29.277095	81.730179	942
142	Shantighat Police	Security forces	Sanni Tribeni	4	29.223859	81.627343	941
143	Raskot Municipality, Ward 8 Office	Ward Office	Raskot	8	29.245523	81.659299	1643
144	Raskot Municipality, Ward 9 Office	Ward Office	Raskot	9	29.251749	81.66784	1756
145	Sanni Raskot Post Office	Post Office	Raskot	5	29.242448	81.642485	1866
146	Apple Zone	Government	Raskot	5	29.240388	81.639743	1800
147	Raskot Municipality Office	Administrative	Raskot	5	29.238222	81.637208	1738
148	Raskot Municipality, Ward 7 Office	Administrative	Raskot	7	29.234848	81.639391	1556
149	Raskot Municipality, Ward 6 Office	Administrative	Raskot	6	29.233874	81.628198	1480
150	Raskot Municipality, Ward 5 Office	Administrative	Raskot	5	29.238618	81.63832	1719
151	Raskot Municipality, ward 2 Office	Administrative	Raskot	1	29.258427	81.621078	1829
152	Raskot Municipality, ward 1 Office	Administrative	Raskot	1	29.261019	81.612047	1792
153	Raskot Municipality, ward 3 Office	Administrative	Raskot	3	29.256105	81.635842	1956
154	Raskot Municipality, ward 4 Office	Administrative	Raskot	5	29.24896	81.644378	1952

155	Pachaljarna Rural Municipality, Ward. 9 Office	Administrative	Pachaljharana	9	29.260501	81.681098	1643
156	Pachaljarna Rural Municipality, Ward. 9 Office (old)	Administrative	Pachaljharana	9	29.2631	81.68811	1511
157	Pachaljarna Rural Municipality, Ward. 8 Office	Administrative	Pachaljharana	8	29.281305	81.70889	1515
158	Pachaljharana Rural Municipality, Ward. 7 Office	Administrative	Pachaljharana	8	29.295935	81.719953	1988
159	Pachaljarna Rural Municipality, Ward. 6 Office	Administrative	Pachaljharana	7	29.318113	81.724809	1884
160	Pachaljarna Rural Municipality, Ward. 4 Office	Administrative	Pachaljharana	4	29.276579	81.729962	950
161	Agriculture Development Department	Agriculture	Pachaljharana	4	29.277228	81.730418	947
162	Basic Health Care and Sanitation Office	Health care and Sanitation	Pachaljharana	4	29.277415	81.730604	946
163	Rastriya Parachiya Patra Tatha Panjikaran Bibag	Citizenship	Pachaljharana	4	29.276698	81.72977	945
164	Pachaljharana Rural Municipality Office	Rural Municipality Office	Pachaljharana	4	29.276399	81.729576	943

## 12.7 Religious Places

<i>S.N</i>	<i>Type</i>	<i>Name</i>	<i>Municipality</i>	<i>Ward</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Elevation (m)</i>
1	Temple	Jitte Gada Mandir	Palata	5	29.134833	81.580077	771.34
2	Temple	Shiva Mandir	Palata	2	29.32214	81.758188	1283.17
3	Temple	Shiva Mandir	Palata	1	29.338376	81.772328	2007.22
4	Temple	Kalika Mandir	Palata	3	29.347749	81.795062	2129.13
5	Temple	Chhalaaa Mandir	Palata	4	29.342945	81.803726	2145.14
6	Temple	Saraswati Chala Mandir	Palata	4	29.342755	81.804119	2154.50
7	Temple	Kalika Mandir	Palata	5	29.344774	81.815444	2103.06
8	Temple	Khinaa Mandir	Palata	5	29.345037	81.815361	2103.26
9	Temple	Kalasila Mandir	Palata	5	29.346573	81.81917	2301.53
10	Temple	Kalika Mandir	Palata	5	29.346211	81.818558	2266.31
11	Temple	Khaaar Masta Mandir	Palata	5	29.345866	81.818443	2267.52
12	Temple	Shiva Mandir	Palata	5	29.344447	81.817997	2209.91
13	Temple	Ukhadee Mandir	Palata	4	29.360335	81.839742	1817.39
14	Temple	Shiva Mandir	Palata	6	29.354619	81.845545	1825.97

15	Temple	Fakoti Mandir	Palata	7	29.329679	81.810992	1443.78
16	Temple	Thirpu Mandir	Palata	8	29.29863	81.785709	1871.25
17	Temple	Shiva Mandir	Palata	9	29.296715	81.752789	1049.55
18	Temple	Kanthebaada Mandir	Palata	9	29.30269	81.753286	1055.85
19	Temple	Thirpu Mandir	Palata	9	29.304785	81.751944	999.607
20	Temple	Shiva Mandir	Pachaljharana	5	29.27695	81.764819	1948.96
21	Temple	Kalasilo mandir	Pachaljharana	5	29.277691	81.767091	1999.83
22	Temple	Kali Mandir	Pachaljharana	5	29.276374	81.76816	2023.01
23	Temple	Shiva Mandir	Pachaljharana	5	29.277969	81.762829	1829.89
24	Temple	Aaulkot Mandir	Pachaljharana	5	29.27384	81.763278	1707.50
25	Temple	Pachale Mandir	Pachaljharana	2	29.249807	81.706553	1843.62
26	Temple	Thirpu Mandir	Palata	9	29.301154	81.751686	990.390
27	Temple	Chautha Mandir	Naraharinath	9	29.15738	81.54528	1762
28	Temple	Rupadevi Mandir	Naraharinath	9	29.154	81.54466	1691
29	Temple	Rupadevi Main Temple	Naraharinath	9	29.16112	81.5436	1633
30	Temple	Naraharinath Born Place	Naraharinath	8	29.16729	81.55172	1322
31	Temple	Nabadev Mandir	Naraharinath	5	29.22691	81.54302	1948
32	Temple	Gothi Mandir	Naraharinath	4	29.20398	81.55311	2044
33	Temple	Kalika Mandir	Naraharinath	3	29.19618	81.55502	1835
34	Temple	Dadamadu Temple	Naraharinath	3	29.19422	81.55218	1636
35	Temple	Dadamadu Temple	Naraharinath	2	29.18708	81.56219	1783
36	Temple	Chautha Mandir	Naraharinath	2	29.17947	81.56905	1855
37	Temple	Masta Dhalpura Mandir	Naraharinath	2	29.179	81.57061	1918
38	Temple	Devadu Mandir	Naraharinath	2	29.17373	81.57257	2006
39	Temple	Devadu Mandir	Naraharinath	2	29.17297	81.57385	2037
40	Temple	Shiva Mandir	Sanni Tribeni	2	29.18866	81.60585	1481
41	Temple	Daura Mai Mandir	Sanni Tribeni	5	29.23557	81.60258	1723
42	Temple	Kul Devta Mandir	Sanni Tribeni	4	29.2377	81.60925	1477
43	Temple	Mehalmudhi Mandir	Sanni Tribeni	5	29.24459	81.60152	1769
44	Temple	Pancha Dewl Mandir	Sanni Tribeni	5	29.24698	81.60696	1673
45	Temple	Shiva Mandir	Sanni Tribeni	9	29.2908	81.59216	2021

46	Temple	Mahadev Mandir	Sanni Tribeni	9	29.29132	81.59316	2041
47	Temple	Bajjai Madhu Mandir	Sanni Tribeni	7	29.27178	81.60393	1949
48	Temple	Shiva Mandir	Khandachakra	1	29.151032	81.593712	1689.82
49	Temple	Shiva Mandir	Khandachakra	3	29.150446	81.614606	1820.70
50	Temple	Mahadev Mandir	Khandachakra	2	29.15092	81.612207	1802.97
51	Temple	Tadi Mandir	Khandachakra	3	29.13896	81.61446	1799.17
52	Temple	Shiva Mandir	Khandachakra	3	29.137382	81.613668	1770.89
53	Temple	Shiva Mandir	Khandachakra	3	29.135599	81.613384	1729.38
54	Temple	Shree Masta Dhaulpura	Khandachakra	3	29.134087	81.612988	1702.64
55	Temple	Mahadev Mandir	Khandachakra	9	29.131845	81.757809	1884.70
56	Temple	Lingasaini Mandir	Khandachakra	9	29.136279	81.755671	2110.42
57	Temple	Panchadev Mandir	Khandachakra	8	29.131514	81.746489	2180.73
58	Temple	Shiva Mandir	Khandachakra	6	29.11103	81.69621	1493
59	Temple	Shiva Mandir	Khandachakra	6	29.10982	81.69648	1457
60	Temple	Kalikadevi Mandir	Suvakalika	7	29.099525	81.690258	1434.79
61	Temple	Kalika Bhawani	Suvakalika	7	29.099072	81.690274	1436.96
62	Temple	Mahadev Mandir	Suvakalika	7	29.100208	81.682292	1631.09
63	Temple	Ganesh Mandir	Suvakalika	7	29.098637	81.685559	1572.36
64	Temple	Ganesh Mandir	Suvakalika	7	29.101117	81.685991	1532.82
65	Temple	Mahadev Mandir	Suvakalika	8	29.103215	81.674931	1596.65
66	Temple	Mahadev Mandir	Suvakalika	6	29.079147	81.65886	1658.66
67	Temple	Haudi Mandir	Suvakalika	6	29.085553	81.650172	1806.70
68	Temple	Bhawanidevi Mandir	Suvakalika	5	29.107049	81.619435	1651.03
69	Temple	Mahadev Mandir	Suvakalika	3	29.087484	81.58584	1826.33
70	Temple	Mahabai Jaganath	Suvakalika	1	29.086676	81.583598	1909.14
71	Temple	Balchaur Mandir	Suvakalika	3	29.099552	81.588675	1836.27
72	Temple	Mahadev Mandir	Khandachakra	2	29.130767	81.585917	1198.27
73	Temple	Thamkot Devi Mandir	Khandachakra	3	29.12878	81.608009	1210.75
74	Temple	Panchadev Mandir	Khandachakra	2	29.142877	81.602279	1239.17
75	Temple	Shiva Mandir	Khandachakra	2	29.140236	81.601824	1134.22
76	Temple	Shiva Mandir	Raskot	8	29.245721	81.658965	1645
77	Temple	Shiva Mandir	Raskot	8	29.248772	81.671474	1582

78	Temple	Pingla Devi Temple	Raskot	9	29.251674	81.66758	1754
79	Temple	Bagane Temple	Raskot	8	29.248249	81.646702	1880
80	Temple	Dudheshilla Temple	Raskot	2	29.244697	81.622449	1447
81	Temple	Rakmat Dev Temple	Raskot	6	29.235904	81.634512	1660
82	Temple	Kala Shila Devi Temple	Raskot	6	29.236717	81.635083	1671
83	Temple	Phapar Masta Temple	Raskot	6	29.237891	81.636595	1718
84	Temple	Shiva Mandir	Raskot	5	29.241007	81.638956	1762
85	Temple	Phapar Masta Temple	Raskot	3	29.254326	81.634741	1880
86	Temple	Shiva Mandir	Raskot	1	29.259252	81.616225	1818
87	Temple	Panchadeval Temple	Raskot	3	29.255318	81.63673	1935
88	Temple	Shiva Mandir	Raskot	5	29.250662	81.644548	1998
89	Temple	Temple Simanath	Raskot	4	29.251602	81.6446	2015
90	Temple	Deura Malika Temple	Raskot	4	29.280014	81.65011	2846
91	Temple	Kalika Temple	Pachaljharana	9	29.259702	81.679312	1633
92	Temple	Khodai Dhawalpuro Mandir	Pachaljharana	9	29.261083	81.681848	1650
93	Temple	Maru Temple	Pachaljharana	8	29.284712	81.718149	1606
94	Temple	Dade Masto Temple	Pachaljharana	8	29.28629	81.714362	1708
95	Temple	Shiva Mandir	Pachaljharana	8	29.287119	81.71328	1763
96	Temple	Themidunga Temple	Pachaljharana	8	29.288436	81.710489	1876
97	Temple	Panglimai Temple	Pachaljharana	7	29.314658	81.730779	2197
98	Temple	Shiva Mandir	Pachaljharana	7	29.312907	81.739357	1874
99	Temple	Shiva Mandir	Raskot	6	29.219012	81.633711	901
100	Temple	Heremaadu Mandir	Tilagufa	8	29.145195	81.762362	2169.78
101	Temple	Jagannath Temple	Mahawai	7	29.097039	81.751008	1623.32
102	Temple	Shiva Mandir	Mahawai	2	29.089573	81.756149	1742.05
103	Temple	Dewal Mandir	Mahawai	5	29.097433	81.701631	1665.84
104	Temple	Jagannath Temple	Mahawai	6	29.099162	81.718856	1508.94

## 12.8 Landing Zone

<i>S.N.</i>	<i>Name</i>	<i>Ownership</i>	<i>Municipality</i>	<i>Ward</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Elevation (m)</i>
1	Helipad	Government	Sanni Tribeni	5	29.24479	81.60123	1773
2	Helipad	Government	Naraharinath	3	29.19215	81.55568	1669
3	Suntharali Airport (Underconstruction)	Government	Naraharinath	2	29.17274	81.57465	2047

## 12.9 Geographic Features

<i>S.N</i>	<i>Type</i>	<i>Name</i>	<i>Municipality</i>	<i>Ward</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Elevation (m)</i>
1	Farmland	Apple Garden	Pachaljharana	4	29.255857	81.725827	2240.21
2	Peak	K C Danda	Palata	1	29.338605	81.758438	1373.67
3	Peak	Pakho	Palata	1	29.335789	81.758693	1375.28
4	Peak	Pakho	Palata	1	29.349968	81.756283	1599.83
5	Pond	Irrigation Pond	Palata	6	29.344647	81.842959	1982.08
6	WaterFall	Pachaljharana	Pachaljharana	3	29.249147	81.72548	1642.25
7	Pond	Kumalgaun Irrigation Pond	Naraharinath	3	29.19426	81.5566	1727
8	Pond	Wodhela	Naraharinath	2	29.17741	81.57131	1916
9	Pond	Naina Gaun Pond	Sanni Tribeni	2	29.2019	81.59924	1759
10	Pond	Bidhut Nahar Mumra	Sanni Tribeni	7	29.26327	81.60003	1531
11	Farm Land	Farm Land	Raskot	9	29.251406	81.66354	1753
12	Pond	Rakhada Taal	Raskot	4	29.286456	81.646383	2959
13	Fountain	Bayal Jharana	Pachaljharana	8	29.295798	81.707044	1902
14	Pond	Panglimai Pokhari	Pachaljharana	7	29.314606	81.730791	2199
15	Cave	Tila Gufa	Tilagufa	9	29.159514	81.841054	1869.51
16	Waterfall	Jharana	Tilagufa	2	29.165469	81.876938	1929.25
17	Waterfall	Jharana	Tilagufa	6	29.168867	81.830187	2128.28

## 12.10 Settlements

<i>Sn.</i>	<i>Name</i>	<i>Municipality</i>	<i>Ward</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Elevation (m)</i>
1	Vanka	Pachaljharana	3	29.247506	81.713362	1658.26
2	Jite Bazar	Khandachakra	2	29.134348	81.580046	808.40
3	Jite Bazar	Khandachakra	2	29.134423	81.578673	737.32
4	Ra Laees	Naraharinath	1	29.135129	81.577396	735.95
5	Lalighat Market	Naraharinath	1	29.141959	81.580238	723.48
6	Balu Thirpu	Palata	9	29.308768	81.754319	931.18
7	Saina	Palata	2	29.322113	81.758575	1283.18
8	Khada	Palata	1	29.35011	81.768244	1974.41
9	Khada	Palata	1	29.350797	81.769078	2017.12
10	Mathillo Meejubada	Palata	1	29.34279	81.775148	2104.13
11	Muni Mejubada	Palata	1	29.343755	81.774903	2090.64
12	Joisi Mejubada	Palata	1	29.344308	81.774847	2082.81
13	Mejubada	Palata	1	29.343676	81.774271	2059.57
14	Tallo Mejubada	Palata	1	29.343013	81.774111	2045.02
15	Tallo Mejubada	Palata	1	29.345416	81.774008	2038.52
16	Sital	Palata	1	29.34583	81.773125	2014.64
17	Bhat	Palata	1	29.338427	81.771015	1969.07
18	Larpha	Palata	2	29.346086	81.77579	2131.78
19	Ghoachaagada	Palata	1	29.341027	81.775497	2103.36
20	Panera	Palata	2	29.346931	81.782197	1798.36
21	Budukot	Palata	3	29.351421	81.795549	2041.29
22	Chhala	Palata	4	29.343713	81.803622	2136.17
23	Kalmalkot	Palata	4	29.352222	81.802463	2245.19
24	Khaina	Palata	5	29.346448	81.815718	2122.30
25	Dalita	Palata	5	29.347255	81.81633	2153.71
26	Mehelya	Palata	5	29.349628	81.817065	2278.56
27	Mehelya	Palata	5	29.349522	81.817486	2294.53
28	Khaina	Palata	5	29.344901	81.815324	2100.95
29	Jafya	Palata	5	29.347257	81.822761	2310.14
30	Dalit Tole	Palata	5	29.349196	81.831138	2161.77
31	Dalit Tole	Palata	5	29.349772	81.828515	2144.62

32	Kaami Tole	Palata	5	29.348415	81.82493	2138.89
33	Neta	Palata	5	29.342498	81.823375	2130.99
34	Neta	Palata	5	29.34294	81.823074	2132.53
35	Ukhadi	Palata	5	29.358353	81.834989	1984.51
36	Ukhadi	Palata	5	29.35951	81.835782	1918.77
37	Ukhadi	Palata	4	29.363254	81.837857	1824.73
38	Serighat Ukhadee	Palata	4	29.363113	81.838088	1812.26
39	Deuska	Palata	4	29.359988	81.839735	1799.61
40	Jafe	Palata	4	29.356894	81.856029	1843.21
41	Kalemada	Palata	4	29.35701	81.857207	1823.13
42	Chadne Gaun	Palata	6	29.354925	81.857845	1868.03
43	Village	Palata	6	29.354846	81.857868	1870.22
44	Chhicha	Palata	6	29.35393	81.85709	1830.82
45	Gothaa Chaur	Palata	6	29.35329	81.848464	1785.36
46	Gotha Chaur	Palata	6	29.354418	81.845198	1818.23
47	Gotha Chaur	Palata	6	29.354463	81.845219	1834.80
48	Tusare Gaun	Palata	6	29.350316	81.843787	1918.73
49	Jagla	Palata	6	29.348699	81.844276	1938.14
50	Tusare	Palata	6	29.348406	81.844239	1988.60
51	Chuthro	Palata	6	29.341652	81.84531	2079.90
52	Masina	Palata	6	29.338952	81.846083	2113.11
53	Khumla	Palata	5	29.334201	81.838643	1903.19
54	Fakoti	Palata	5	29.328076	81.830074	1391.19
55	Fakoti	Palata	7	29.331221	81.810543	1395.40
56	Faakoti	Palata	7	29.331354	81.811491	1401.42
57	Haasubaada	Palata	7	29.330962	81.810976	1429.46
58	Dainikar	Palata	7	29.324894	81.797571	1514.99
59	Charne Kulo Gaun	Palata	7	29.324573	81.797138	1498.38
60	Dainikar	Palata	7	29.325749	81.795505	1433.08
61	Parauti	Palata	8	29.303575	81.785296	1931.46
62	Dalit Basti	Palata	8	29.303491	81.784905	1898.54
63	Dalit Basti	Palata	8	29.302927	81.784768	1898.09
64	Dalit Basti	Palata	8	29.302858	81.784636	1883.95

65	Dalit Basti	Palata	8	29.30287	81.784206	1863.173
66	Darji Tole	Palata	8	29.301212	81.784168	1839.705
67	Bista	Palata	8	29.299029	81.785511	1869.277
68	Sunabada	Palata	8	29.294687	81.786888	1873.402
69	Sunabada	Palata	8	29.294695	81.786633	1869.712
70	Naaebaada	Palata	8	29.295925	81.785598	1692.141
71	Naaebaada	Palata	8	29.295487	81.781992	1674.777
72	Bersyankot	Palata	8	29.301893	81.780095	1696.047
73	Bokchu Gaun	Palata	8	29.302785	81.779417	1590.865
74	Thirpu	Palata	9	29.297487	81.75019	958.907
75	Lakhanbada	Palata	9	29.296838	81.752322	1046.476
76	Lakhanbada	Palata	9	29.296978	81.752618	1051.921
77	Paati Khetaa	Palata	9	29.296852	81.752941	1047.570
78	Pipalchautaaroo	Palata	9	29.302956	81.753138	1058.125
79	Kanthebada	Palata	9	29.303217	81.753106	1052.880
80	Jaubada	Palata	9	29.30317	81.753042	1052.336
81	Kantubada Thirpu	Palata	9	29.302868	81.753052	1034.123
82	Kauntibaada	Palata	9	29.302849	81.752236	1029.045
83	Gindaar	Palata	9	29.304639	81.751681	993.3977
84	Pachalajharana	Palata	9	29.295508	81.758118	1645.256
85	Baachkot	Pachaljharana	5	29.279251	81.764929	1904.861
86	Baachkot	Pachaljharana	5	29.278152	81.764777	1910.927
87	Shahi Gaun	Pachaljharana	5	29.276023	81.765533	1966.421
88	Aacharya	Pachaljharana	5	29.275863	81.765538	1962.321
89	Tirsala	Pachaljharana	5	29.275738	81.767806	2031.285
90	Dalit	Pachaljharana	5	29.277842	81.762993	1818.603
91	Koilaa Khani	Pachaljharana	5	29.271404	81.756647	1519.681
92	Ramnakot	Pachaljharana	4	29.27555	81.747543	1558.514
93	Ramnakot	Pachaljharana	4	29.275794	81.747442	1560.560
94	Ramnakot	Pachaljharana	4	29.275372	81.747862	1552.962
95	Dada Gaun	Pachaljharana	3	29.254747	81.721254	1907.082
96	Khaddu	Pachaljharana	3	29.253793	81.722501	1935.420
97	Khaddu	Pachaljharana	3	29.255967	81.724234	2076.578

98	Khaddu	Pachaljharana	4	29.25811	81.729274	2315.07
99	Dugiri	Pachaljharana	4	29.257527	81.729563	2263.12
100	Kimpata	Pachaljharana	3	29.25331	81.727807	2054.00
101	Khaddu	Pachaljharana	3	29.251131	81.727601	1908.09
102	Kharkot	Pachaljharana	2	29.244358	81.699809	1549.30
103	Kharkot	Pachaljharana	1	29.234152	81.67664	1312.76
104	Kharkot	Pachaljharana	1	29.23431	81.674664	1229.43
105	Siku	Pachaljharana	1	29.227664	81.670719	1244.78
106	Vaatadi	Pachaljharana	1	29.226608	81.660106	872.689
107	Sital	Palata	1	29.345777	81.772899	2017.17
108	Bhat	Palata	1	29.338305	81.77125	1976.27
109	Bista Paakhaa	Palata	8	29.308686	81.778587	1956.20
110	Village Start Point	Naraharinath	8	29.15758	81.55732	1419
111	Brahmin Gaun	Naraharinath	8	29.16	81.5545	1454
112	Ratimata Bazzar	Naraharinath	6	29.1881	81.54334	1658
113	BhatGaun	Naraharinath	4	29.20828	81.53608	1789
114	Khatirupsa	Naraharinath	4	29.22065	81.53879	1790
115	Khatirupsa	Naraharinath	5	29.23143	81.55184	2019
116	Adhela Rupsa	Naraharinath	4	29.21914	81.54955	1933
117	Gothi KumalGaun	Naraharinath	4	29.20582	81.55022	1946
118	Parka KumalGaun	Naraharinath	3	29.19483	81.55369	1753
119	Bharata Gaun	Naraharinath	3	29.19648	81.5599	1611
120	Bhademala Kotbada	Naraharinath	2	29.18294	81.56841	1809
121	Bhauthikot Majiuna 02	Naraharinath	1	29.17943	81.56749	1811
122	Wodhela Gaun 02	Naraharinath	2	29.17748	81.57108	1910
123	Suntharali Gaun	Naraharinath	2	29.16816	81.57539	1977
124	Ratimata Bazzar	Naraharinath	2	29.16982	81.57059	1859
125	Kotbada	Naraharinath	1	29.17107	81.56757	1763
126	Kotbada	Naraharinath	1	29.17106	81.56757	1763
127	Kotbada	Naraharinath	1	29.17106	81.56757	1763
128	SotarGaun	Naraharinath	1	29.1708	81.56689	1744
129	Hasala Gaun	Naraharinath	1	29.16413	81.57899	1792
130	Serijula 02	Sanni Tribeni	2	29.18667	81.6064	1234

131	Raku Gaun 02	Sanni Tribeni	2	29.19108	81.61203	1067
132	Luyata Gaun	Sanni Tribeni	3	29.21923	81.61813	1447
133	Kayari Gaun	Sanni Tribeni	4	29.22908	81.61481	1318
134	Riskot	Sanni Tribeni	4	29.23236	81.61378	1248
135	Ujyal Gaun	Sanni Tribeni	5	29.23876	81.60191	1716
136	Riskot Village	Sanni Tribeni	4	29.23711	81.61086	1427
137	Dadakheth Village	Sanni Tribeni	4	29.23747	81.60834	1480
138	Dhami Ghau Mehalmudhi	Sanni Tribeni	5	29.24567	81.60238	1741
139	Huwadi Pato	Sanni Tribeni	6	29.25638	81.59192	1786
140	Balipata 08 Mumra	Sanni Tribeni	9	29.28814	81.58954	1879
141	Mumra Talao Gaun	Sanni Tribeni	9	29.29196	81.59396	2079
142	Mumra Mathi Gaun 09	Sanni Tribeni	9	29.29379	81.59647	2194
143	Kholyakhada Village 09	Sanni Tribeni	7	29.29026	81.60121	2182
144	Ragil Bazar	Sanni Tribeni	1	29.17199	81.6105	838
145	Lalighat Bazar	Naraharinath	1	29.14598	81.58023	725
146	Sera	Shubha Kalika	7	29.10447	81.68745	1341
147	Naaibada	Shubha Kalika	7	29.101569	81.687293	1467.05
148	Kota Basti	Shubha Kalika	7	29.099107	81.689979	1433.34
149	Kafalkatiya	Shubha Kalika	7	29.097685	81.687293	1543.11
150	Shuwada	Shubha Kalika	7	29.097322	81.686294	1580.69
151	Mahadebada	Shubha Kalika	7	29.099223	81.682432	1635.10
152	Mahatara Tol	Shubha Kalika	7	29.10128	81.682694	1543.05
153	SamalGaun	Shubha Kalika	8	29.101089	81.668218	1700.57
154	Dahachaur Haudi	Shubha Kalika	6	29.078304	81.660332	1659.74
155	Haudi	Shubha Kalika	6	29.08292	81.650933	1769.43
156	Khatebada	Shubha Kalika	5	29.104881	81.64663	1654.23
157	Chaulagaibada	Shubha Kalika	5	29.106511	81.62647	1575.45
158	Thana	Shubha Kalika	5	29.106578	81.620184	1650.58
159	Shaubada	Shubha Kalika	3	29.087718	81.587882	1744.42
160	Majhmela	Shubha Kalika	3	29.095207	81.583268	1892.30
161	Ghotimela	Shubha Kalika	3	29.098336	81.585505	1862.34
162	Balachaur	Shubha Kalika	3	29.099583	81.589148	1833.67
163	Chati	Shubha Kalika	1	29.103709	81.557566	1780.30

164	Baratu	Khandachakra	11	29.165123	81.622481	1396.42
165	Badalkot	Khandachakra	11	29.178104	81.637392	1254.93
166	Jite Bazar	Khandachakra	2	29.134359	81.578612	730
167	Lalighat	Naraharinath	1	29.141344	81.580304	724
168	Mane Bazar Shantighat	Sanni Tribeni	4	29.217105	81.632645	896
169	Shantighat New Bazar	Sanni Tribeni	4	29.223774	81.627377	942
170	Shantighat Old Bazar	Raskot	6	29.220709	81.631079	917
171	Purchhe Gaun	Raskot	7	29.230925	81.63962	1401
172	Gairi Gaun	Raskot	7	29.231016	81.649837	1415
173	Uper Gaun	Raskot	7	29.233915	81.649328	1487
174	Bakharkot Tol	Raskot	8	29.238786	81.659192	1380
175	Patdil	Raskot	8	29.241365	81.660779	1488
176	Bahun Tole	Raskot	8	29.245523	81.65864	1644
177	Bastola Gaun	Raskot	8	29.245198	81.664436	1622
178	Tholma Gaun	Raskot	8	29.24961	81.671221	1579
179	Tamti	Raskot	9	29.251524	81.66028	1792
180	Rcp Bazar	Raskot	5	29.239191	81.638003	1772
181	Baddala Gaun	Raskot	6	29.238109	81.629477	1469
182	Okhaldhunga Gaun	Raskot	6	29.243671	81.628957	1501
183	Gorkhali Gaun	Raskot	6	29.238406	81.633373	1570
184	Rana Gaun	Raskot	6	29.239558	81.635816	1640
185	Bijayapur	Raskot	5	29.246048	81.638801	1755
186	Koli Gaun	Raskot	3	29.254247	81.634903	1877
187	Janalikot	Raskot	2	29.257604	81.625457	1879
188	Hipkot	Raskot	1	29.260528	81.61293	1796
189	Rampur Gaun	Raskot	1	29.260162	81.611526	1754
190	Kimpata	Raskot	3	29.25331	81.727807	2054
191	Budhasaini	Raskot	2	29.254228	81.622729	1680
192	Syuna Bahun Tol	Raskot	4	29.251722	81.641893	1921
193	Basantapur	Raskot	4	29.251845	81.644659	2016
194	Sipti	Raskot	3	29.272964	81.645458	2665
195	Tikhathi	Pachaljharana	9	29.260192	81.680717	1624
196	Khadka Gaun	Pachaljharana	9	29.269463	81.694164	1450

197	Maya Gaun	Pachaljharana	8	29.28461	81.71849	1587
198	Bhitta	Pachaljharana	8	29.286491	81.714197	1716
199	Bhitta	Pachaljharana	8	29.286672	81.713896	1728
200	Khodtali	Pachaljharana	8	29.288306	81.710275	1877
201	Tallo Nanikot	Pachaljharana	8	29.296004	81.717878	1963
202	Mathillo Nanikot	Pachaljharana	8	29.29742	81.721911	2023
203	Nuwaghar	Pachaljharana	7	29.308675	81.728158	2115
204	Bolu Gaun	Pachaljharana	6	29.325257	81.723415	1988
205	Tolbhir	Pachaljharana	6	29.318224	81.741257	1710
206	Jarkot	Pachaljharana	4	29.276249	81.729626	952
207	Kurna Tol	Pachaljharana	4	29.278934	81.732971	979
208	Jarkot	Pachaljharana	8	29.275442	81.727009	922
209	Lafa	Pachaljharana	8	29.271372	81.713643	935
210	Lafa	Pachaljharana	4	29.269053	81.711307	950
211	Bhura	Pachaljharana	9	29.262162	81.702463	911
212	Udgad	Pachaljharana	9	29.247338	81.683311	890
213	Bhatadit	Raskot	7	29.228696	81.657556	872
214	Nadi Gaun	Raskot	7	29.223461	81.644571	940
215	Okkharvitta	Tilagufa	8	29.141644	81.764691	1951.55
217	Kuni	Mahawai	6	29.097714	81.726898	1694.05
218	Ratada	Tilagufa	2	29.180424	81.896032	2257.18
219	Thinke	Tilagufa	11	29.112684	81.793849	2153.70
220	Chhapre	Tilagufa	7	29.154385	81.784642	2106.25
221	Paadamghat	Tilagufa	11	29.098035	81.761459	1479.82
222	Rudu	Tilagufa	11	29.10694	81.773043	2067.51
223	Pipal Chowk	Mahawai	5	29.099265	81.702548	1554.28
224	Mahwei	Tilagufa	11	29.100162	81.773649	1792.59
225	Ramni Kotbada	Mahawai	7	29.098403	81.745871	1647.54
226	Daadakhala	Mahawai	4	29.0673	81.748343	1944.74
227	Settlement	Tilagufa	11	29.101755	81.773643	1877.56
228	Nagma	Tilagufa	1	29.197125	81.909295	2043.02
229	Ganeshkot	Mahawai	6	29.100614	81.722199	1501.27
230	Odhanku	Mahawai	2	29.088492	81.755672	1780.90

231	Manma Bazar	Khandachakra	1	29.150725	81.612386	1810.88
232	Chauki Basti	Khandachakra	9	29.134389	81.75508	2031.54
233	Darjitol	Khandachakra	8	29.123558	81.739212	2003.70
234	Sahibada	Khandachakra	7	29.113208	81.717482	1643.11
235	Motila	Khandachakra	5	29.12269	81.66686	1627
236	Tesro Bazar	Khandachakra	5	29.12015	81.66621	1546
237	Nare	Khandachakra	6	29.11877	81.6925	1766
238	Dadha Bada	Khandachakra	6	29.12139	81.69401	1815
239	Goral Bada	Khandachakra	6	29.12402	81.69657	1863
240	Dahasera	Khandachakra	6	29.10791	81.69759	1375
241	Thamkot	Khandachakra	3	29.133322	81.606261	1137.68

### 12.11 Utility Infrastructure

<i>Sn.</i>	<i>Type</i>	<i>Municipality</i>	<i>Ward</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Elevation(m)</i>
1	Resting Place	Pachaljharana	5	29.285539	81.759181	1913
2	Telecom Tower	Palata	2	29.343295	81.776496	2149
3	Resting Place	Palata	1	29.358114	81.761674	1675
4	Resting Place	Palata	1	29.356877	81.76037	1712
5	Resting Place	Palata	5	29.357569	81.832561	2036
6	Resting Place	Palata	5	29.35822	81.836157	1956
7	Resting Place	Palata	6	29.354153	81.844933	1907
8	Resting Place	Pachaljharana	4	29.26813	81.726723	1550
9	Public Tap	Pachaljharana	4	29.25748	81.721074	1869
10	Public Tap	Palata	1	29.341676	81.761223	1365
11	Public Tap	Palata	1	29.341681	81.761221	1372
12	Public Tap	Palata	1	29.35857	81.76198	1669
13	Public Tap	Palata	1	29.350622	81.768641	2013
14	Public Tap	Palata	1	29.350813	81.770426	2028
15	Public Tap	Palata	1	29.343635	81.774215	2054
16	Public Tap	Palata	1	29.340319	81.775581	2096
17	Public Tap	Palata	2	29.346275	81.776145	2141
18	Public Tap	Palata	2	29.345899	81.776337	2141
19	Public Tap	Palata	5	29.349756	81.827426	2145

20	Public Tap	Palata	5	29.346083	81.824437	2143
21	Public Tap	Palata	5	29.348542	81.824687	2153
22	Public Tap	Palata	5	29.360369	81.835515	1905
23	Public Tap	Palata	6	29.356921	81.857445	1823
24	Public Tap	Palata	6	29.35469	81.845625	1802
25	Public Tap	Palata	6	29.344931	81.843108	1981
26	Public Tap	Palata	6	29.344945	81.843104	1976
27	Public Tap	Palata	6	29.341093	81.845743	2102
28	Public Tap	Palata	7	29.331165	81.811113	1406
29	Public Tap	Palata	7	29.324744	81.79699	1494
30	Public Tap	Palata	7	29.32536	81.795955	1455
31	Public Tap	Palata	7	29.325413	81.795951	1447
32	Public Tap	Palata	2	29.326102	81.788868	1204
33	Public Tap	Palata	7	29.305492	81.785439	1989
34	Public Tap	Palata	8	29.302916	81.784788	1890
35	Public Tap	Palata	8	29.299051	81.785285	1861
36	Public Tap	Palata	9	29.297161	81.750551	1036
37	Public Tap	Palata	9	29.299622	81.754529	1047
38	Public Tap	Palata	9	29.302915	81.752344	1038
39	Public Tap	Pachaljharana	5	29.280613	81.765426	1912
40	Public Tap	Pachaljharana	5	29.279	81.764848	1914
41	Public Tap	Pachaljharana	5	29.275602	81.765472	1964
42	Public Tap	Pachaljharana	5	29.27795	81.767376	2014
43	Public Tap	Pachaljharana	5	29.275937	81.767787	2026
44	Public Tap	Pachaljharana	5	29.272823	81.76597	1959
45	Public Tap	Pachaljharana	5	29.276728	81.764312	1812
46	Public Tap	Pachaljharana	5	29.274302	81.762879	1767
47	Public Tap	Pachaljharana	5	29.274577	81.753074	1561
48	Public Tap	Pachaljharana	4	29.275645	81.746882	1531
49	Public Tap	Pachaljharana	4	29.274904	81.745257	1628
50	Public Tap	Pachaljharana	3	29.253577	81.722137	1923
51	Public Tap	Pachaljharana	3	29.253963	81.727588	2100
52	Public Tap	Pachaljharana	3	29.24524	81.713358	1635

53	Public Tap	Pachaljharana	3	29.247293	81.712051	1763
54	Public Tap	Pachaljharana	2	29.249412	81.705377	1838
55	Public Tap	Pachaljharana	2	29.247133	81.703334	1794
56	Radio Station	Palata	9	29.304546	81.752207	995
57	Water Distribution Tank	Palata	8	29.295655	81.781572	1685
58	Water Distribution Tank	Palata	9	29.303001	81.752267	1041
59	Public Tap	Palata	5	29.357966	81.835339	1982
60	Water Distribution Tank	Naraharinath	8	29.15986	81.55446	1457
61	Public Tap	Naraharinath	8	29.1614	81.54968	1549
62	Public Tap	Naraharinath	8	29.15739	81.54884	1721
63	Water Distribution Tank	Naraharinath	8	29.15627	81.548	1791
64	Telecommunication	Naraharinath	9	29.15517	81.54745	1844
65	Public Tap	Naraharinath	8	29.16115	81.54646	1602
66	Public Tap	Naraharinath	6	29.17695	81.54911	1540
67	Public Tap	Naraharinath	6	29.18185	81.54411	1769
68	Public Tap	Naraharinath	7	29.1923	81.53745	1726
69	Public Tap	Naraharinath	4	29.2031	81.5364	1816
70	Public Tap	Naraharinath	5	29.21865	81.53728	1845
71	Public Tap	Naraharinath	5	29.21942	81.53767	1843
72	Public Tap	Naraharinath	5	29.22097	81.53676	1805
73	Public Tap	Naraharinath	5	29.22299	81.54038	1700
74	Water Distribution Tank	Naraharinath	5	29.22477	81.54066	1681
75	Public Tap	Naraharinath	5	29.22808	81.54571	1922
76	Public Tap	Naraharinath	5	29.23082	81.55183	2013
77	Public Tap	Naraharinath	4	29.21809	81.54656	1863
78	Public Tap	Naraharinath	4	29.21518	81.54617	1882
79	Public Tap	Naraharinath	4	29.20686	81.54793	1870
80	Public Tap	Naraharinath	3	29.19634	81.55438	1830
81	Water Distribution Tank	Naraharinath	3	29.19547	81.55441	1797
82	Resting Place	Naraharinath	3	29.19423	81.55231	1700
83	Public Tap	Naraharinath	3	29.19282	81.55718	1731
84	Telecommunication Tower	Naraharinath	2	29.18717	81.5627	1797
85	Water Distribution Tank	Naraharinath	2	29.18751	81.56123	1754

86	Public Tap	Naraharinath	2	29.17903	81.56762	1809
87	Water Distribution Tank	Naraharinath	2	29.17885	81.56786	1814
88	Water Distribution Tank	Naraharinath	2	29.17892	81.56844	1827
89	Public Tap	Naraharinath	2	29.17949	81.57058	1907
90	Public Tap	Naraharinath	2	29.17736	81.57029	1887
91	Public Tap	Naraharinath	1	29.1682	81.57569	1990
92	Water Distribution Tank	Naraharinath	1	29.16754	81.57252	1884
93	Public Tap	Naraharinath	1	29.16748	81.5723	1877
94	Resting Place	Naraharinath	1	29.16846	81.57118	1867
95	Public Tap	Naraharinath	1	29.17158	81.56892	1839
96	Water Distribution Tank	Naraharinath	1	29.17159	81.56787	1788
97	Public Tap	Naraharinath	1	29.16523	81.57939	1809
98	Public Tap	Sanni Tribeni	1	29.16809	81.59605	1400
99	Public Tap	Sanni Tribeni	2	29.18107	81.60683	1194
100	Public Tap	Sanni Tribeni	2	29.18141	81.60596	1230
101	Water Distribution Tank	Sanni Tribeni	2	29.18513	81.60812	1185
102	Power Plant	Sanni Tribeni	2	29.18944	81.6124	1060
103	Rice Mill	Sanni Tribeni	2	29.1903	81.61225	1084
104	Public Tap	Sanni Tribeni	2	29.20228	81.59949	1750
105	Public Tap	Sanni Tribeni	3	29.21086	81.60588	1828
106	Public Tap	Sanni Tribeni	3	29.21804	81.61445	1419
107	Public Tap	Sanni Tribeni	3	29.21763	81.62135	1319
108	Public Tap	Sanni Tribeni	4	29.22878	81.61468	1325
109	Public Tap	Sanni Tribeni	4	29.23235	81.61387	1245
110	Public Tap	Sanni Tribeni	4	29.23315	81.60632	1560
111	Public Tap	Sanni Tribeni	4	29.23366	81.60601	1578
112	Public Tap	Sanni Tribeni	5	29.23671	81.60627	1523
113	Public Tap	Sanni Tribeni	5	29.2376	81.60749	1496
114	Public Tap	Sanni Tribeni	5	29.23983	81.60797	1494
115	Radio/F.M.	Sanni Tribeni	5	29.24364	81.60332	1704
116	Public Tap	Sanni Tribeni	5	29.24498	81.60179	1756
117	Public Tap	Sanni Tribeni	5	29.24541	81.60196	1749
118	Public Tap	Sanni Tribeni	5	29.24665	81.60641	1670

119	Telecommunication	Sanni Tribeni	5	29.24708	81.60687	1671
120	Public Tap	Sanni Tribeni	5	29.24684	81.60587	1688
121	Public Tap	Sanni Tribeni	6	29.24827	81.60416	1696
122	Public Tap	Sanni Tribeni	6	29.2485	81.60388	1709
123	Public Tap	Sanni Tribeni	6	29.2493	81.60384	1712
124	Public Tap	Sanni Tribeni	6	29.25628	81.5917	1783
125	Public Tap	Sanni Tribeni	6	0	0	0
126	Public Tap	Sanni Tribeni	9	29.29086	81.592	2017
127	Public Tap	Sanni Tribeni	9	29.29103	81.59309	2034
128	Public Tap	Sanni Tribeni	7	29.28825	81.60333	2190
129	Water Distribution Tank	Sanni Tribeni	7	29.28811	81.60225	2186
130	Public Tap	Sanni Tribeni	7	29.27895	81.60433	2059
131	Public Tap	Sanni Tribeni	7	29.27023	81.60652	1848
132	Public Tap	Sanni Tribeni	7	29.26973	81.60473	1850
133	Public Tap	Sanni Tribeni	7	29.26714	81.60365	1744
134	Power Plant	Sanni Tribeni	7	29.26147	81.59929	1441
135	Public Tap	Sanni Tribeni	5	29.24573	81.60903	1553
136	Power Plant	Sanni Tribeni	3	29.2097	81.62146	843
137	Power Plant	Khandachakra	1	29.16101	81.59653	834
138	Resting Place	Khandachakra	1	29.150848	81.593792	1681
139	Resting Place	Khandachakra	1	29.151835	81.595947	1692
140	Park	Khandachakra	1	29.152361	81.596359	1701
141	Resting Place	Khandachakra	1	29.152157	81.596493	1698
142	Hello Nepal Tower	Khandachakra	1	29.152291	81.597572	1689
143	Radio Station	Khandachakra	1	29.152897	81.60031	1714
144	Radio Station	Khandachakra	1	29.153037	81.603889	1756
145	Water Distribution Tank	Khandachakra	1	29.153178	81.605091	1782
146	Telecom Tower	Khandachakra	1	29.152196	81.60626	1762
147	Radio Station	Khandachakra	1	29.152442	81.605948	1771
148	Pratima chowk- Park	Khandachakra	1	29.151459	81.607884	1756
149	Water Distribution Tank	Khandachakra	1	29.150702	81.614646	1827
150	Army Gate	Khandachakra	1	29.150565	81.614893	1831
151	Love Park	Khandachakra	1	29.150773	81.612438	1807

152	Traffic Station	Khandachakra	1	29.149745	81.611867	1724
153	Public Toilet	Khandachakra	1	29.146334	81.614685	1766
154	Telecom Tower	Khandachakra	3	29.142773	81.615863	1905
155	Rain Gauge	Khandachakra	3	29.141362	81.615101	1875
156	Water Distribution Tank	Khandachakra	3	29.139147	81.61453	1800
157	Resting Place	Khandachakra	3	29.138623	81.614287	1793
158	Bus Stop	Khandachakra	3	29.138093	81.614123	1769
159	Generator	Khandachakra	3	29.138209	81.614254	1775
160	Canal	Khandachakra	9	29.132791	81.755325	1940
161	Public Tap	Khandachakra	9	29.135084	81.754851	2061
162	Public Tap	Khandachakra	9	29.135464	81.755622	2053
163	Public Tap	Khandachakra	9	29.135725	81.755291	2081
164	Water Distribution Tank	Khandachakra	9	29.137971	81.756631	2095
165	Water Mill	Khandachakra	9	29.139537	81.744809	2068
166	Water Distribution Tank	Khandachakra	8	29.131488	81.746733	2178
167	Public Tap	Khandachakra	8	29.130874	81.747821	2133
168	Public Tap	Khandachakra	7	29.114694	81.718134	1642
169	Public Tap	Khandachakra	7	29.108218	81.715787	1471
170	Public Tap	Khandachakra	7	29.108285	81.716133	1461
171	Public Tap	Khandachakra	6	29.11903	81.6937	1727
172	Water Distribution Tank	Khandachakra	6	29.10917	81.6965	1448
173	Resting place	Suvakalika	7	29.10588	81.69085	1245
174	Public Tap	Suvakalika	7	29.10434	81.68697	1356
175	Public Tap	Suvakalika	7	29.099086	81.682783	1616
176	Hydro Station	Suvakalika	6	29.081138	81.650368	1771
177	Telecom Tower	Suvakalika	5	29.106413	81.651798	1637
178	Telecom Tower	Suvakalika	1	29.087135	81.58072	2008
179	Water Distribution Tank	Suvakalika	1	29.103599	81.557953	1790
180	Water Distribution Tank	Suvakalika	1	29.106419	81.557546	1718
181	Water Distribution Tank	Khandachakra	2	29.145245	81.602296	1341
182	Water Distribution Tank	Khandachakra	11	29.16297	81.623234	1472
183	Media Office	Khandachakra	1	29.151301	81.608198	1757
184	Internet Service Provider	Khandachakra	2	29.149768	81.61184	1731

185	Jeep Counter	Naraharinath	1	29.141992	81.580228	733
186	Public Tap	Raskot	6	29.226661	81.633247	1258
187	Public Tap	Raskot	6	29.228671	81.63195	1272
188	Public Tap	Raskot	7	29.232534	81.642461	1417
189	Public Tap	Raskot	7	29.234901	81.649685	1485
190	Public Tap	Raskot	8	29.241124	81.661523	1481
191	Nepal Telecom Tower	Raskot	9	29.247157	81.664147	1781
192	Canal	Raskot	9	29.248328	81.659162	1821
193	Resting Place	Raskot	5	29.242048	81.64127	1866
194	Resting place	Raskot	5	29.240033	81.639545	1794
195	Resting Place	Raskot	6	29.244241	81.628757	1487
196	Canal	Raskot	2	29.245377	81.625215	1507
197	Public Tap	Raskot	6	29.240512	81.632915	1536
198	Jeep Counter	Raskot	5	29.238974	81.637912	1754
199	Public Tap	Raskot	3	29.254088	81.638415	1859
200	Resting Place	Raskot	2	29.255992	81.632826	1870
201	Ticket Counter	Raskot	1	29.259026	81.620224	1851
202	Public Tap	Raskot	3	29.25618	81.637792	1942
203	Public Tap	Raskot	4	29.277739	81.650158	2788
204	Resting place	Raskot	4	29.278571	81.6497	2807
205	Public Tap	Pachaljharana	8	29.286138	81.715453	1707
206	Resting Place	Pachaljharana	6	29.31321	81.739983	1874
207	Resting Place	Pachaljharana	6	29.312977	81.742255	1804
208	Entrance Gate	Pachaljharana	6	29.313234	81.742331	1801
209	Resting Place	Pachaljharana	6	29.313288	81.746394	1495
210	Field Office	Pachaljharana	4	29.276661	81.729703	945
211	Public Tap	Pachaljharana	4	29.269576	81.712161	938
212	Public Tap	Raskot	8	29.232802	81.663135	865
213	Resting Place	Raskot	6	29.219925	81.631674	904
214	Public Tap	Raskot	6	29.219921	81.631603	907
215	Power House	Tilagufa	8	29.145416	81.773808	1561
216	Power House	Mahawai	7	29.104914	81.750937	1344
217	Water Mill	Tilagufa	9	29.127475	81.820705	1802

218	Public Tap	Tilagufa	11	29.100558	81.773861	1807
219	Public Tap	Tilagufa	8	29.146341	81.762372	2191
220	Power House	Tilagufa	2	29.174071	81.894797	2197
221	Public Tap	Mahawai	7	29.100824	81.741408	1778
222	Public Tap	Mahawai	5	29.096501	81.701817	1685
223	Hydro Station	Mahawai	7	29.10443	81.75079	1372
224	Canal	Tilagufa	11	29.112526	81.793744	2152
225	Canal	Tilagufa	11	29.112269	81.793922	2150
226	Bus Stop	Khanadachakra	3	29.14793	81.614337	1753

## 12.12 Palika wise WASH facilities

<i>S.N</i>	<i>Municipality</i>	<i>Categories</i>	<i>Classes</i>	<i>Number</i>	<i>Total</i>
1	Subhakalika	Health Amenities	Health Post	8	10
			Pharmacy	2	
		Water Facilities	Water Distribution Tank	2	4
			Public Tap	2	
		Schools	Primary	7	17
Secondary	8				
Kindergarten	2				
2	Palata	Health Amenities	Health Post	10	10
			Water Distribution Tank	2	32
		Schools	Public Tap	30	
			Primary	15	18
			Secondary	2	
Kindergarten	1				
3	Sanni Tribeni	Health Amenities	Health Post	9	10
			Hospital	1	
		Water Facilities	Water Distribution Tank	2	33
			Public Tap	31	
		Schools	Primary	20	27
			Secondary	5	
Kindergarten	1				
4	Khandachakra	Health Amenities	College	1	
			Health Post	11	16
			Hospital	3	
		Water Facilities	Pharmacy/Medical	2	
			Water Distribution Tank	8	16
		Schools	Public Tap	8	
			Primary	18	30
Secondary	11				
Kindergarten	1				
Public Toilet	1	1			
5	Mahawai	Health Amenities	Health Post	3	3
			Public Tap	2	2
		Schools	Primary	8	19
Secondary	11				
6	Pachaljharana	Health Amenities	Health Post	6	13
			Hospital	2	
			Pharmacy/Medical	5	

7	Tilagufa	Water Facilities	Public Tap	20	20
		Schools	Primary	16	23
			Secondary	7	
		Health Amenities	Health Post	10	11
			Pharmacy/Medical	1	
8	Raskot	Water Facilities	Public Tap	2	2
		Schools	Kindergarten	4	34
			Primary	14	
			Secondary	15	
			Higher Secondary	1	
		Health Amenities	Health Post	6	11
			Hospital	2	
			Medical Hall	3	
		Water Facilities	Public Taps	11	11
		9	Naraharinath	Schools	Kindergarten
Primary	14				
Secondary	5				
Higher Secondary	1				
Health Amenities	Health Post			11	11
Water Facilities	Water Tank			9	34
	Public Taps	25			
	Schools	Primary	20	31	
		Secondary	10		
		Higher Secondary	1		

## 12.13 Constraints

<i>Sn.</i>	<i>Type of Constraint</i>	<i>Risk Level</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Elevation</i>
1	Narrow Width	Moderate	29.1042159	81.56143425	1772.717
2	Narrow Width	Moderate	29.1042159	81.56143425	1771.768
3	Narrow Width	Moderate	29.1042159	81.56143425	1771.79
4	Narrow Width	Moderate	29.1042159	81.56143425	1773.51
5	Narrow Width	Moderate	29.1042159	81.56143425	1769.658
6	Narrow Width	Moderate	29.1042159	81.56143425	1775.259
7	Narrow Width	Moderate	29.1042159	81.56143425	1769.549
8	Narrow Width	Moderate	29.10496715	81.5616018	1733.398
9	Narrow Width	Moderate	29.10496715	81.5616018	1733.398
10	Narrow Width	Moderate	29.10496715	81.5616018	1733.398
11	Narrow Width	Moderate	29.10496715	81.5616018	1733.398
12	Rocky and Bouldary	High	29.1037368	81.5613361	1795.577
13	Rocky and Bouldary	High	29.1037368	81.5613361	1795.577
14	Narrow Width	Low	29.10934425	81.6299587	1618.793
15	Narrow Width	Low	29.10891545	81.6291124	1613.002
16	Rocky and Bouldary	High	29.10825595	81.628493	1612.392
17	Rocky and Bouldary	High	29.1073598	81.6278701	1619.707
18	Narrow Width	Moderate	29.1075491	81.6273285	1586.179
19	Rocky and Bouldary	Moderate	29.1067002	81.6267649	1590.751
20	Rocky and Bouldary	Moderate	29.1067002	81.6267649	1590.142
21	Rocky and Bouldary	Moderate	29.1067002	81.6267649	1590.446
22	Rocky and Bouldary	Moderate	29.1067002	81.6267649	1590.751
23	Narrow Width	Low	29.10533975	81.6246933	1632.204
24	Rocky and Bouldary	Moderate	29.10616785	81.62369135	1632.509
25	Slippary	Low	29.1059904	81.62308205	1647.749
26	Narrow Width	Low	29.1061442	81.62153845	1649.273
27	Stream crossing	Moderate	29.106369	81.6190065	1664.208
28	Slippary	Low	29.1063453	81.61878985	1662.989
29	Narrow Width	Low	29.10618565	81.6165388	1645.006
30	Narrow Width	Low	29.10544625	81.61567225	1634.338
31	Narrow Width	Low	29.10313935	81.6135871	1627.327
32	Rocky and Bouldary	Moderate	29.10382545	81.61155945	1586.179
33	Narrow Width	Moderate	29.10065485	81.60921705	1612.087
34	Narrow Width	Moderate	29.09615315	81.6115899	1632.814
35	Stream crossing	Moderate	29.09113655	81.6116509	1604.772
36	Slippary	Low	29.09117795	81.6113868	1600.81
37	Narrow Width	Moderate	29.0917045	81.61000575	1591.056
38	Narrow Width	Moderate	29.0928581	81.6048741	1616.964
39	Rocky and Bouldary	Moderate	29.0928403	81.6047048	1616.354
40	Narrow Width	Moderate	29.0914974	81.60375025	1683.106
41	Narrow Width	Moderate	29.0917459	81.6020374	1673.962
42	Narrow Width	Moderate	29.0918287	81.6001554	1665.732
43	Rocky and Bouldary	Moderate	29.0915625	81.5993362	1659.941
44	Rocky and Bouldary	High	29.0914501	81.5991466	1662.379

45	Rocky and Bouldary	High	29.0913495	81.5990451	1668.17
46	Narrow Width	Moderate	29.09121345	81.59896385	1679.14
47	Slippary	Low	29.08901245	81.59638785	1670.30
48	Narrow Width	Moderate	29.0835222	81.59213625	1642.26
49	Stream crossing	Moderate	29.0823421	81.58937035	1639.82
50	Stream crossing	Low	29.08285385	81.5889239	1644.09
51	Rocky and Bouldary	Low	29.08285385	81.5889239	1644.09
52	Rocky and Bouldary	Moderate	29.0876875	81.5895061	1691.64
53	Rocky and Bouldary	Moderate	29.0871595	81.58384595	1912.92
54	Slippary	Low	29.0924085	81.5816411	1917.80
55	Slippary	Low	29.10094475	81.5900494	1837.94
56	Rocky and Bouldary	Moderate	29.1170156	81.5933701	1735.53
57	Narrow Width	Moderate	29.1165129	81.5921718	1737.66
58	Stream crossing	Moderate	29.1035534	81.5606388	1772.10
59	Rocky and Bouldary	Moderate	29.1048932	81.5613479	1727.30
60	Narrow Width	Moderate	29.10523925	81.5619065	1728.21
61	Rocky and Bouldary	Moderate	29.1055291	81.5620791	1715.71
62	Slippary	Moderate	29.1048518	81.5634771	1817.82
63	Rocky and Bouldary	Moderate	29.12397675	81.5891947	1502.66
64	Narrow Width	Low	29.12537835	81.5891676	1352.70
65	Rocky and Bouldary	Moderate	29.1262536	81.58873435	1284.42
66	Rocky and Bouldary	Moderate	29.1312042	81.58597005	1110.69
67	Narrow Width	Moderate	29.12587735	81.6136476	1208.53
68	Rocky and Bouldary	Moderate	29.1246539	81.6151154	1225.90
69	Rocky and Bouldary	Moderate	29.1287966	81.6141135	1479.49
70	Rocky and Bouldary	Low	29.1416849	81.601853	1205.17
71	Slippary	Moderate	29.162062	81.62360335	1534.36
72	Stream crossing	Moderate	29.16817755	81.6269323	1203.9
73	Rocky and Bouldary	Moderate	29.1683242	81.6268098	1202.13
74	Narrow Width	Moderate	29.16894495	81.62692995	1224.38
75	Rocky and Bouldary	Moderate	29.17164795	81.6232826	1213.10
76	Narrow Width	Moderate	29.17364885	81.62467975	1288.08
77	Rocky and Bouldary	Moderate	29.17275015	81.6271508	1351.48
78	Stream crossing	Moderate	29.176634	81.6363259	1219.
79	Rocky and Bouldary	Moderate	29.17676405	81.636529	1220.41
80	Stream crossing	Moderate	29.17239865	81.61772865	853.13
81	Stream crossing	Moderate	29.1686596	81.6143893	886.96
82	Rocky and Bouldary	Moderate	29.16785565	81.61379355	891.5
83	Rocky and Bouldary	Moderate	29.166094	81.6132926	982.98
84	Narrow Width	Moderate	29.1597329	81.6128678	1261.56
85	Rocky and Bouldary	Moderate	29.15752775	81.6122534	1349.04
86	Rocky and Bouldary	High	29.1565936	81.61106865	1404.21
87	Slippary	Moderate	29.1561975	81.60946415	1461.51
88	Rocky and Bouldary	High	29.14400575	81.6146974	1820.87
89	Narrow Width	Moderate	29.1505748	81.6123956	1780.03
90	Rocky and Bouldary	Moderate	29.15126215	81.5952598	1676.70
91	Rocky and Bouldary	Moderate	29.1270815	81.76032385	1492.60

92	Narrow Width	Moderate	29.1275872	81.76048125	1520.64
93	Rocky and Bouldary	Moderate	29.13059145	81.7592322	1791.61
94	Narrow Width	Moderate	29.1333383	81.755248	1975.10
95	Stream crossing	Low	29.1388141	81.7433531	2153.41
96	Narrow Width	Moderate	29.1266972	81.7422564	2114.09
97	Rocky and Bouldary	High	29.12596385	81.7401204	2062.88
98	Stream crossing	Moderate	29.11785845	81.7373413	1932.12
99	Narrow Width	Moderate	29.1154187	81.7341459	1887.32
100	Narrow Width	High	29.1145759	81.7283474	1784.90
101	Rocky and Bouldary	Moderate	29.1155724	81.72333245	1744.06
102	Slippary	Moderate	29.11027285	81.7171988	1506.62
103	Rocky and Bouldary	Moderate	29.1151971	81.68661785	1677.92
104	Stream crossing	Low	29.1232434	81.6948933	1845.56
105	Narrow Width	Moderate	29.12218475	81.6962202	1756.25
106	Slippary	Low	29.1177431	81.6947038	1681.58
107	Narrow Width	High	29.10727995	81.6965554	1260.65
108	Rocky and Bouldary	High	29.1084452	81.6935275	1172.56
109	Rocky and Bouldary	High	29.10792465	81.6926203	1138.42
110	Rocky and Bouldary	Moderate	29.1059195	81.6911529	1224.07
111	Narrow Width	Moderate	29.10517675	81.68957525	1303.02
112	Slippary	Moderate	29.100717	81.6839597	1534.97
113	Slippary	Moderate	29.1005011	81.6732326	1602.02
114	Rocky and Bouldary	Moderate	29.0944938	81.6663137	1759.91
115	Slippary	Moderate	29.0931835	81.6653219	1734.92
116	Rocky and Bouldary	High	29.0926924	81.6650985	1752.90
117	Narrow Width	Moderate	29.0917252	81.6651154	1807.46
118	Rocky and Bouldary	Moderate	29.0913199	81.6627814	1732.48
119	Stream crossing	Low	29.08572325	81.6643656	1753.21
120	Slippary	Moderate	29.0802861	81.6626562	1717.54
121	Rocky and bouldary	Moderate	29.07927435	81.66248015	1714.19
122	Narrow Width	Low	29.07973585	81.6544983	1769.05
123	Slippary	Low	29.08118545	81.6503627	1774.24
124	Rocky and Bouldary	Moderate	29.08526925	81.6511768	1763.57
125	Narrow Width	Moderate	29.08776885	81.6500783	1761.43
126	Slippary	High	29.0889683	81.6482318	1752.29
127	Slippary	High	29.08988825	81.648209	1760.52
128	Slippary	High	29.0914353	81.64945295	1718.76
129	Stream Crossing	High	29.14444542	81.77444456	1518
130	Rocky and Bouldary	Low	29.14158247	81.76431272	1945
131	Slippary	Low	29.14166667	81.76416667	1911
132	Narrow Width	Low	29.14194444	81.76416667	1902
133	Narrow Width	Low	29.14194444	81.76416667	1920
134	Rocky and Bouldary	Low	29.14222222	81.76416667	1922
135	Rocky and Bouldary	Low	29.14222222	81.76416667	1930
136	Narrow Width	Low	29.14277778	81.76444444	1946
137	Narrow Width	Low	29.14333333	81.76444444	1967
138	Narrow Width	Low	29.14583333	81.76194444	2138

139	Narrow Width	Low	29.14611111	81.76194444	2143
140	Narrow Width	Low	29.14638889	81.76222222	2151
141	Rocky and Bouldary	Low	29.14944444	81.76166667	2135
142	Narrow Width	Low	29.15083333	81.76194444	2136
143	Stream Crossing	Low	29.15277778	81.76027778	2135
144	Rocky and Bouldary	Low	29.15305556	81.76	2134
145	Rocky and Bouldary	Low	29.15888889	81.76777778	2154
146	Rocky and Bouldary	Low	29.15861111	81.76888889	2154
147	Narrow Width	Low	29.15361111	81.77527778	2118
148	Narrow Width	Low	29.1575	81.78444444	2085
149	Narrow Width	Low	29.15722222	81.78472222	2084
150	Narrow Width	Low	29.1575	81.785	2096
151	Narrow Width	Low	29.1575	81.78611111	2157
152	Narrow Width	Low	29.16444444	81.82833333	1970
153	Narrow Width	Low	29.16472222	81.82277778	2120
154	Narrow Width	Low	29.16944444	81.83166667	2055
155	Narrow Width	Low	29.16861111	81.83194444	2096
156	Narrow Width	Low	29.16791119	81.83198449	2186
157	Narrow Width	Low	29.19045256	81.88609314	2353
158	Narrow Width	Low	29.10317035	81.71473362	1142
159	Rocky and Bouldary	Low	29.18201828	81.897789	2170
160	Rocky and Bouldary	Low	29.14422167	81.77450333	1545
161	Narrow Width	Low	29.15786742	81.83989714	1932
162	Narrow Width	Low	29.156847	81.83464811	2220
163	Slippery	Low	29.09962356	81.70279562	1543
164	Slippery	Low	29.12696075	81.81807708	1846
165	Narrow Width	Low	29.11878775	81.80143736	2047
166	Narrow Width	Low	29.10589408	81.77334594	2061
167	Narrow Width	Low	29.09914397	81.76807403	1625
168	Rocky and Bouldary	Low	29.08902167	81.76177978	1616
169	Narrow Width	Low	29.08226394	81.75679014	1698
170	Narrow Width	Low	29.07490728	81.75188444	1839
171	Narrow Width	Moderate	29.07556533	81.75212094	1845
172	Narrow Width	Low	29.09806442	81.74448394	1691
173	Narrow Width	Low	29.10124014	81.74118042	1739
174	Narrow Width	Low	29.10032844	81.72297667	1493
175	Narrow Width	Low	29.097414	81.71865844	1504
176	Narrow Width	Low	29.09746931	81.70162961	1618
177	Narrow Width	Low	29.09363744	81.70262908	1751
178	Narrow Width	Low	29.09295272	81.70225522	1780
179	Narrow Width	Low	29.09186172	81.70153044	1855
180	Narrow Width	Low	29.09569358	81.70064544	1708
181	Slippery	Low	29.09951972	81.70475767	1518
182	Narrow Width	Low	29.10092925	81.70616911	1465
183	Narrow Width	Low	29.10077856	81.70629881	1464
184	Rocky and Bouldary	Low	29.10109328	81.70766447	1418
185	Narrow Width	Moderate	29.10219192	81.71294403	1196

186	Rocky and Bouldary	Low	29.10355375	81.71565244	1153
187	Narrow Width	High	29.313975	81.75397167	1016
188	Rocky and Bouldary	Moderate	29.31466927	81.7542726	1040.25
189	Narrow Width	High	29.31599013	81.75479053	1075.04
190	Narrow Width	High	29.34228667	81.76009667	1389.6
191	Narrow Width	High	29.3581496	81.76170697	1688.68
192	Narrow Width	High	29.350815	81.77025	2009.5
193	Rocky and Bouldary	Moderate	29.31464903	81.75429333	1041.9
194	Rocky and Bouldary	Moderate	29.346578	81.81921296	2311.19
195	Rocky and Bouldary	High	29.35007167	81.84370833	1917.4
196	Narrow Width	Moderate	29.34187295	81.84521538	2048.87
197	Narrow Width	Moderate	29.3354098	81.84448947	2024.44
198	Rocky and Bouldary	Moderate	29.24234581	81.69806669	1723
199	Narrow Width	Moderate	29.27420806	81.75401306	1575
200	Rocky and Bouldary	Low	29.27365303	81.75531767	1567
201	Rocky and Bouldary	High	29.28722381	81.76006317	1846
202	Stream Crossing	High	29.33345238	81.81250613	1318.32
203	Stream Crossing		29.362532	81.836944	1835.10
204	Stream Crossing	High	29.363115	81.836943	1820.22
205	Stream Crossing	High	29.363069	81.838161	1798.19
206	Stream Crossing	High	29.354292	81.856494	1821.29
207	Stream Crossing		29.325105	81.789787	1148.15
208	Narrow Width	Low	29.22028419	81.63205883	931.468
209	Narrow Width	Low	29.224637	81.6343485	1227.73
210	Narrow Width	Low	29.2261645	81.6330458	1247.54
211	Narrow Width	Low	29.2287987	81.6319833	1277.41
212	Narrow Width	Low	29.23183217	81.64032075	1420.36
213	Narrow Width	Low	29.2313594	81.645505	1372.21
214	Narrow Width	Low	29.2300732	81.6508821	1350.87
215	Narrow Width	Low	29.2449717	81.6618423	1637.69
216	Narrow Width	Low	29.2486653	81.6699044	1630.68
217	Narrow Width	Low	29.2514414	81.6602477	1821.79
218	Stream crossing	Low	29.2485091	81.6465973	1899.51
219	Narrow Width	Low	29.2363022	81.6355117	1669.69
220	Narrow Width	Low	29.2338738	81.6307237	1513.02
221	Stream crossing	Low	29.2452771	81.6290057	1491.38
222	Rocky way	Low	29.2450776	81.6234934	1448.41
223	Rocky way	Low	29.2447002	81.6224996	1424.94
224	Narrow Width	Low	29.2479729	81.6290677	1622.45
225	Narrow Width	Low	29.2393785	81.6358883	1655.978
226	Stream crossing	Moderate	29.2474899	81.6318314	1576.73
227	Stream crossing	Low	29.2539219	81.6394754	1848.917
228	Stream crossing	Low	29.2571009	81.6319645	1932.432
229	Stream crossing	Low	29.2571009	81.6319645	1932.432
230	Stream crossing	Low	29.2586799	81.6237858	1878.178
231	Stream crossing	Low	29.2705666	81.6143297	2095.195
232	Stream crossing	Low	29.2600388	81.6120753	1760.22

233	Narrow Width	Low	29.2541033	81.6712904	1609.344
234	Narrow Width	Low	29.2564434	81.6746432	1461.211
235	Narrow Width	Low	29.2570237	81.6753499	1465.174
236	Narrow Width	Low	29.2598739	81.6791305	1645.615
237	Narrow Width	Low	29.2608122	81.6815364	1651.102
238	Narrow Width	Low	29.2603851	81.6845271	1592.58
239	Narrow Width	Low	29.2847859	81.7179756	1586.484
240	Narrow Width	Low	29.2836641	81.7199725	1537.716
241	Narrow Width	Low	29.2848689	81.7179984	1584.35
242	Narrow Width	Low	29.2883227	81.7103477	1870.253
243	Stream crossing	Low	29.2961677	81.7066205	2038.198
244	Narrow Width	Low	29.3139508	81.7278716	2194.56
245	Narrow Width	Low	29.3246371	81.7227647	1985.772
246	Narrow Width	Low	29.3062139	81.7448124	1306.678
247	Narrow Width	Low	29.3139999	81.7315865	2178.406
248	Narrow Width	Low	29.2215739	81.6450141	908.608
249	Narrow Width	Low	29.2208506	81.6388611	895.197
250	Stream Crossing	Moderate	29.270572	81.614364	2097.024
251	Stream Crossing	Moderate	29.256425	81.639763	1951.939
252	Stream Crossing	Low	29.275559	81.646602	2720.645
253	Stream Crossing	Moderate	29.319587	81.723794	1887.017
254	Stream Crossing	Moderate	29.299074	81.741995	1227.734
255	Stream Crossing	Moderate	29.246809	81.682361	904.342
256	Stream Crossing	Moderate	29.222953	81.644908	937.26
257	Stream Crossing	Moderate	29.228506	81.622909	1005.535
258	Stream Crossing	Low	29.232374	81.64148	1419.149
259	Stream Crossing	Low	29.232043	81.644181	1389.583
260	Stream Crossing	Low	29.230544	81.648627	1384.706
261	Stream Crossing	High	29.24106	81.653862	1452.067
262	Stream Crossing	High	29.241647	81.660599	1520.038
263	Stream Crossing	Low	29.234785	81.628313	1472.794
264	Stream Crossing	High	29.245142	81.629014	1489.558
265	Stream Crossing	Moderate	29.247521	81.6318	1576.121
266	Stream Crossing	Moderate	29.253794	81.639658	1851.66
267	Stream Crossing	Moderate	29.258165	81.627003	1882.14
268	Stream Crossing	Moderate	29.254924	81.626917	1729.74
269	Stream Crossing	Low	29.221848	81.640312	918.362
270	Rockey and Bouldary	Low	29.102535	81.735252	1700.012
271	Narrow Width	Moderate	29.101629	81.734486	1702.414
272			29.096799	81.721794	1696.127
273	Narrow Width	Low	29.126404	81.5665582	738.530
274	Narrow Width	Low	29.1280265	81.5663584	783.336
275	Rockey and Bouldary	Low	29.1347741	81.5592465	818.692
276	Stream crossing	Low	29.1359479	81.5585813	824.179
277	Stream crossing	Low	29.1412004	81.5577592	854.964
278	Rockey and Bouldary	Low	29.1416595	81.5569881	894.588
279	Narrow Width	Low	29.1468379	81.5586846	994.562

280	Narrow Width	Low	29.1523581	81.5599935	1177.747
281	Narrow Width	Low	29.1562183	81.5587771	1342.034
282	Narrow Width	Low	29.1599086	81.5549965	1450.848
283	Narrow Width	Low	29.1570663	81.5484774	1752.295
284	Narrow Width	Low	29.1566505	81.5483057	1775.765
285	Stream crossing	Low	29.1598595	81.5442187	1680.058
286	Stream crossing	Low	29.1618199	81.5450549	1601.724
287	Gavion walking	Low	29.1633555	81.5430496	1541.983
288	Rockey and Bouldary	Low	29.1636416	81.5431365	1525.829
289	Rockey and Bouldary	Low	29.1639103	81.5431418	1511.808
290	Rockey and Bouldary	Low	29.1642178	81.54294	1500.53
291	Rockey and Bouldary	Low	29.1641159	81.5468198	1453.591
292	Slippary	Low	29.1674891	81.5505078	1323.137
293	Steep Slope	Low	29.1713664	81.555584	1177.442
294	Narrow width	Low	29.1711943	81.5553915	1176.833
295	River crossing	Low	29.1951386	81.5267086	1687.678
296	River crossing (river without bridge)	Modrate	29.1962812	81.5302303	1719.377
297	Rockey and Bouldary	Low	29.2044596	81.5352796	1822.399
298	Narrow width	Low	29.2177196	81.5339425	1915.058
299	Rockey and Bouldary	Low	29.2252607	81.540986	1731.569
300	Rockey and Bouldary	Low	29.2258658	81.5410852	1784.604
301	Stream crossing	Low	29.2332337	81.553477	2013.204
302	Narrow Width	Low	29.2325005	81.5522057	2019.91
303	Stream crossing	Low	29.2271035	81.5481978	2038.807
304	Rockey and Bouldary	Low	29.2243817	81.5482575	2006.498
305	Narrow Width	Low	29.2207347	81.5523103	1987.906
306	Stream crossing	Low	29.2197	81.5533464	1970.227
307	Narrow Width	Low	29.2140115	81.5473697	1890.065
308	Slippary	Low	29.2017905	81.5574695	1906.524
309	Narrow Width	Low	29.19342	81.5613493	1737.055
310	Steep Slope	Low	29.1786147	81.5683311	1825.447
311	Rockey and Bouldary	Low	29.1770948	81.5729311	1989.125
312	Stream crossing	Low	29.169939	81.5676378	1742.542
313	Rockey and Bouldary	Low	29.1682925	81.5841427	1804.111
314	Narrow Width	Low	29.1686696	81.5844458	1826.362
315	Narrow Width	Low	29.1691567	81.5949172	1427.074
316	Rockey and Bouldary	Low	29.1758103	81.6043371	1177.138
317	Rockey and Bouldary	Low	29.185873	81.6124696	1174.394
318	Narrow Width	Low	29.1894042	81.6071628	1444.142
319	Steep Slope	Low	29.2179853	81.6219458	1342.034
320	Rockey and Bouldary	Low	29.2189228	81.6239709	1384.402
321	Narrow Width	Low	29.2226706	81.619851	1483.157
322	Rockey and Bouldary	Low	29.2229702	81.6185904	1467.612
323	Narrow Width	Low	29.2323519	81.6096506	1417.625
324	Stream crossing	Low	29.2411288	81.6062562	1537.106
325	Rockey and Bouldary	Low	29.2415261	81.6062401	1545.641
326	Narrow Width	Low	29.2416589	81.6067377	1544.422

327	Rockey and Bouldary	Low	29.2689737	81.594661	1537.716
328	Rockey and Bouldary	Low	29.2699973	81.5942185	1545.641
329	Stream crossing	Low	29.2783686	81.5941782	1622.755
330	Narrow Width	Low	29.2787839	81.5941393	1631.594
331	Rockey and Bouldary	Low	29.2796753	81.5938872	1650.187
332	Stream crossing	Low	29.2789477	81.6049808	2090.623
333	Stream crossing	Low	29.2710385	81.6057976	1896.466
334	Rockey and Bouldary	Low	29.2572975	81.5986991	1484.376
335	River Crossing	Moderate	29.17038	81.55499	1164.641
336	Animal Attacking Forest	Moderate	29.19266	81.53069	1743.151
337	Forest	Moderate	29.19489	81.52505	1748.942
338	Damaged Building	Moderate	29.2208	81.5368	1819.961
339	Rock Falling	Moderate	29.16574	81.58147	1767.84
340	Rock Falling	Moderate	29.28124	81.59261	1715.414

## 12.14 Hazards

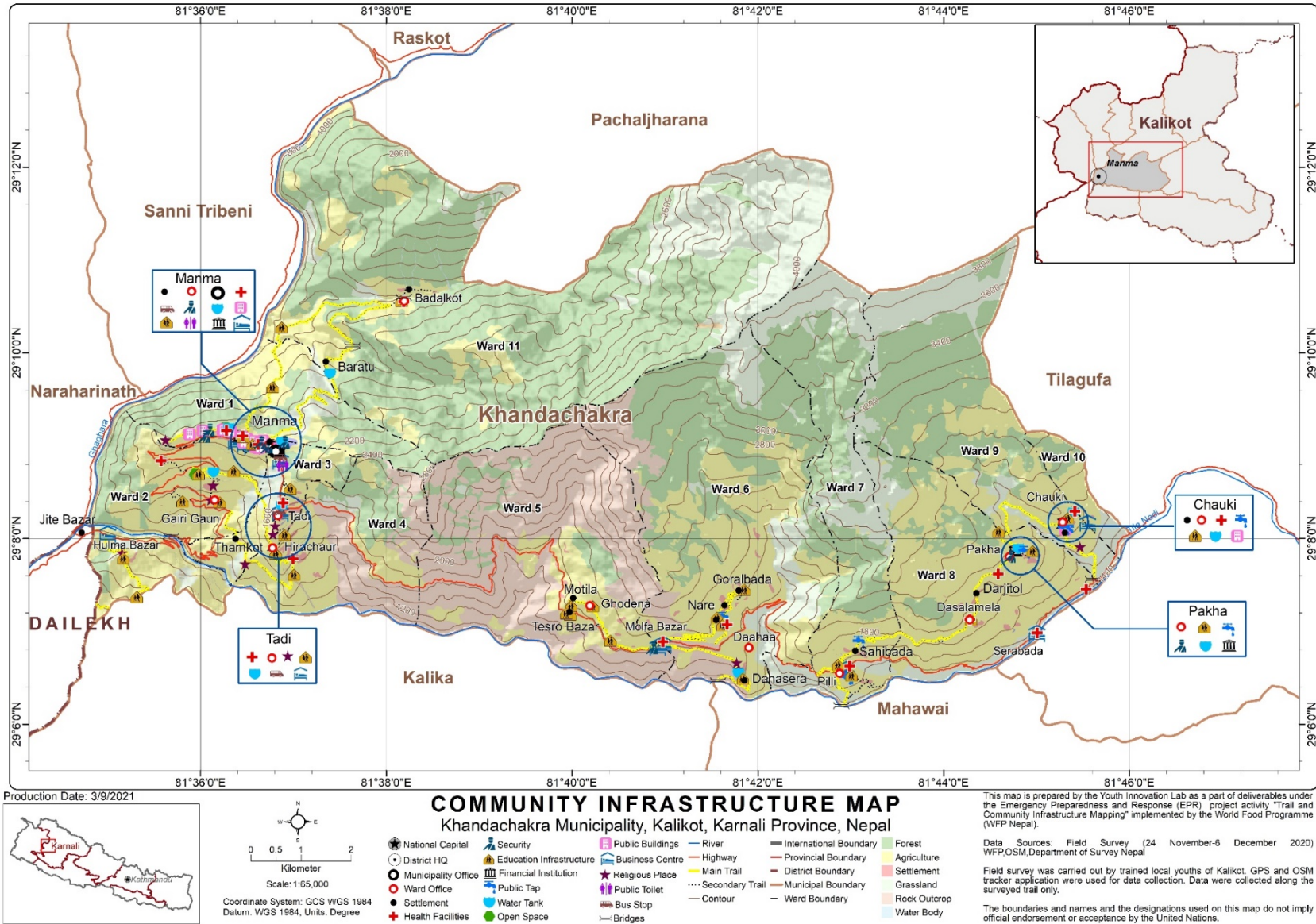
Sn.	Name	Latitude	Longitude	Type	Condition	Length	Width	Elevation	Municipality	Ward
1	Dusi Khola	29.325857	81.78964	Log Crossing	Requires replacement	8	1	1152.518	Palata	2
2	Dusi Khola	29.325244	81.789586	Log Crossing	Requires replacement	13	1	1151.872	Palata	2
3	Faagot Khola	29.32527	81.789764	Log Crossing	Requires replacement	6	1	1154.174	Palata	2
4	Thirpu Khola	29.303962	81.751105	Log Crossing	Requires replacement	3	1	990.086	Palata	9
5	Ghaghara	29.134341	81.576948	Suspended Bridge	In good condition	70	1	729.190	Naraharinath	1
6	Ghaghara	29.312436	81.75459	Suspended Bridge	In good condition	80	1	974.181	Palata	9
7	Jaafe	29.356323	81.857639	Truss Bridge	In good condition	30	1	1823.893	Palata	6
8	Dainikar	29.325464	81.792466	Suspended Bridge	In good condition	80	1	1193.681	Palata	7
9	Dainikar	29.326715	81.792062	Suspended Bridge	In good condition	80	1	1175.295	Palata	7
10	Ghaghara	29.297545	81.750338	Suspended Bridge	In good condition	80	1	960.622	Palata	9
11	Thirpu	29.30359	81.751859	Truss Bridge	In good condition	40	1	994.55	Palata	9
12	Fidd Khola	29.303856	81.75213	Suspended Bridge	In good condition	55	1	994.99	Palata	9
13	Vak Khola	29.245168	81.723152	Suspended Bridge	In good condition	55	1	1379.04	Pachaljharana	3
14	Bhatadi	29.227496	81.658802	Suspended Bridge	In good condition	60	1	877.15	Pachaljharana	1
15	Tila Khola	29.13384	81.59473	Truss Bridge	In good condition	100	6	788	Khandachakra	2
16	Tila Khola	29.13385	81.59574	Truss Bridge	In good condition	100	6	789	Khandachakra	2
17	Ghaghara	29.12567	81.56636	Suspended Bridge	In good condition	89	1	738	Naraharinath	1
18	Ghaghara	29.12645	81.5666	Suspended Bridge	In good condition	89	1	730	Naraharinath	1
19	Khulalu	29.12807	81.56653	Suspended Bridge	In good condition	60	1	724	Naraharinath	1
20	Khulalu	29.12782	81.56596	Suspended Bridge	In good condition	60	1	733	Naraharinath	1
21	Shreekot	29.16095	81.54463	Log Bridge	Require replacement	5	1	1635	Naraharinath	8
22	Shreekot	29.16115	81.54469	Log Bridge	Require replacement	4	1	1625	Naraharinath	8
23	Ragad	29.17147	81.55563	Suspended Bridge	Require reconstruction	90	1	1182	Naraharinath	6

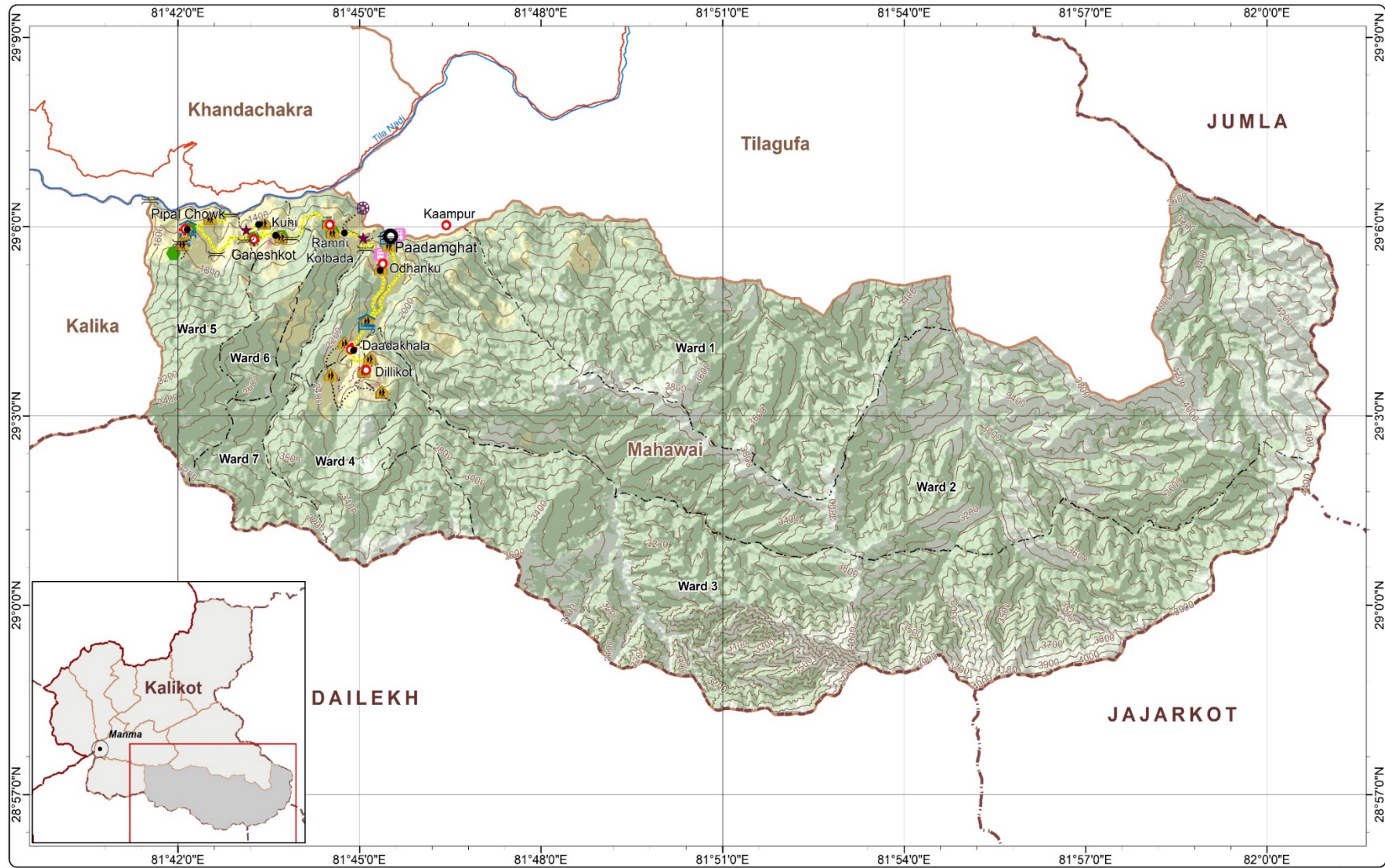
24	Kumal Gaun	29.18835	81.54154	Causeway	In good condition	9	1	1670	Naraharinath	7
25	Khatirupsa	29.22347	81.54076	Suspended Bridge	In good condition	95	1	1678	Naraharinath	4
26	Khatirupsa	29.22147	81.54082	Suspended Bridge	In good condition	95	1	1664	Naraharinath	4
27	Khatirupsa	29.23111	81.54761	Stone-slab crossing	Require replacement	3	1	1861	Naraharinath	5
28	Khatirupsa	29.23308	81.55353	Log Bridge	Require replacement	5	1	1996	Naraharinath	5
29	Riskot	29.21725	81.61241	Truss Bridge	In good condition	20	1	1386	Sanni Tribeni	3
30	Riskot	29.21743	81.61253	Truss Bridge	In good condition	20	1	1389	Sanni Tribeni	3
31	Riskot	29.25531	81.59238	Suspended Bridge	In good condition	45	1	1733	Sanni Tribeni	6
32	Riskot	29.25556	81.59216	Suspended Bridge	In good condition	45	1	1736	Sanni Tribeni	6
33	Mumra	29.27663	81.59459	Timber Bridge	In good condition	6	1	1565	Sanni Tribeni	9
34	Mumra	29.26088	81.59966	Suspended Bridge	In good condition	70	1	1435	Sanni Tribeni	7
35	Mumra	29.26055	81.59888	Suspended Bridge	In good condition	70	1	1443	Sanni Tribeni	6
36	Mumra	29.25342	81.59811	Suspended Bridge	In good condition	45	1	1523	Sanni Tribeni	6
37	Mumra	29.25301	81.59853	Suspended Bridge	In good condition	45	1	1520	Sanni Tribeni	6
38	Riskot	29.22915	81.61966	Suspended Bridge	Require reconstruction	60	1	1012	Sanni Tribeni	4
39	Shantighat	29.22346	81.62722	Truss Bridge	In good condition	35	2	939	Sanni Tribeni	4
40	Shantighat	29.21942	81.6312	Suspended Bridge	In good condition	58	1	909	Sanni Tribeni	4
41	Ghaghara	29.13437	81.57693	Suspended Bridge	In good condition	130	1	739	Naraharinath	1
42	Ghaghara	29.13383	81.57826	Suspended Bridge	In good condition	130	1	734	Naraharinath	1
43	Tila Nadi	29.126084	81.760132	Cause Way	In good condition	10	1	1440.83	Khandachakra	8
44	Gela	29.10786	81.69285	Suspended Bridge	In good condition	43	1	1123	Khandachakra	6
45	Gela	29.1075	81.69274	Truss Bridge	In good condition	30	1	1110	Mahawai	5
46	Gela	29.10684	81.69231	Truss Bridge	In good condition	30	1	1137	Mahawai	5
47	Gela	29.1067	81.69209	Truss Bridge	In good condition	30	1	1137	Suvakalika	7
48	Dahachaur	29.078161	81.66125	Suspended Bridge	In good condition	30	1	1657.91	Suvakalika	8

49	Dahachaur	29.078261	81.660543	Suspended Bridge	In good condition	30	1	1654.086	Suvakalika	6
50	Haudi	29.079844	81.650114	Suspended Bridge	In good condition	30	1	1755.591	Suvakalika	6
51	Haudi	29.08036	81.649568	Suspended Bridge	In good condition	30	1	1765.362	Suvakalika	6
52	Thana	29.091081	81.61156	Log Bridge	In good condition	2	1	1557.287	Suvakalika	4
53	Shaubada	29.082401	81.589374	Suspended Bridge	In good condition	30	1	1621.871	Suvakalika	3
54	Shaubada	29.082779	81.589041	Suspended Bridge	In good condition	30	1	1625.12	Suvakalika	3
55	Balachaur	29.099588	81.587822	Concrete Bridge	In good condition	4	1	1842.40	Suvakalika	3
56	Tila Nadi	29.133429	81.594445	Truss Bridge	In good condition	20	3	782.37	Khandachakra	2
57	Tila Nadi	29.13329	81.596884	Truss Bridge	In good condition	15	3	793.56	Khandachakra	2
58	Baratu	29.167973	81.627239	Log Bridge	In good condition	5	1	1156.12	Khandachakra	11
59	Badalkot	29.176659	81.636445	Log Bridge	In good condition	8	1	1212.54	Khandachakra	11
60	Ghagara	29.133737	81.578355	Suspended Bridge	In good conditon	45	1	718	Naraharinath	1
61	Ghagara	29.134315	81.577055	Suspended Bridge	In good conditon	45	1	729	Naraharinath	1
62	Shantighat	29.219376	81.631306	Suspended Bridge	In good conditon	25	3	899	Sanni Tribeni	4
63	Shantighat	29.223555	81.627271	Belly Bridge	In good conditon	33	4	937	Sanni Tribeni	4
64	Ramal masta	29.254242	81.639427	Suspended Bridge	In good conditon	40	2	1856	Raskot	3
65	Tholma	29.256432	81.674687	Suspended Bridge	In good conditon	50	1	1452	Raskot	9
66	Ghagara Jarkot	29.276452	81.729337	Suspended Bridge	In good conditon	75	2	942	Pachaljharana	4
67	Ghagara Jarkot	29.276898	81.728676	Suspended Bridge	In good conditon	75	2	940	Pachaljharana	8
68	Ghagara Lafa	29.271366	81.713213	Suspended Bridge	In good conditon	120	1	938	Pachaljharana	8
69	Ghagara Lafa	29.269948	81.713642	Suspended Bridge	In good conditon	120	1	932	Pachaljharana	4
70	Bhatadi Bridge	29.22841	81.657835	Suspended Bridge	In good conditon	130	1	870	Raskot	7
71	Bhatadi Bridge	29.227516	81.658798	Suspended Bridge	In good conditon	130	1	863	Pachaljharana	1
72	Shantighat	29.219853	81.631536	Suspended Bridge	In good conditon	50	1	906	Raskot	6
73	Shantighat	29.229289	81.620417	Suspended Bridge	Requires reconstrution	45	2	1000	Sanni Tribeni	4

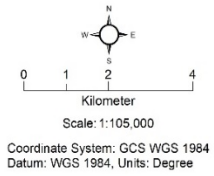
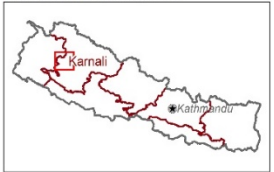
74	Shantighat	29.229379	81.620244	Log crossing	In good conditon	3	1	994	Sanni Tribeni	4
75	Paadamghat	29.097081	81.757959	Suspended Bridge	In good conditon	62	1	1479.049	Mahawai	2
76	Magma	29.197172	81.909664	Suspended Bridge	In good conditon	64	1	2030.643	Tilagufa	1
77	Tila Nadi	29.127359	81.820505	Timber Bridge	Require replacement	3	1	1826.690	Tilagufa	9
78	Tila Nadi	29.1597	81.842769	Suspended Bridge	In good conditon	87	1	1879.347	Tilagufa	9
79	Tila Nadi, Raachuli	29.164942	81.871011	Suspended Bridge	In good conditon	77	1	1927.388	Tilagufa	4
80	Tila Nadi, Ratada	29.18483	81.890661	Suspended Bridge	In good conditon	85	1	2001.99	Tilagufa	2
81	Tila Nadi	29.163407	81.829583	Concrete Bridge	In good conditon	30	7	1959.89	Tilagufa	5
82	Tila Nadi	29.103388	81.714971	Suspended Bridge	In good conditon	65	1	1181.46	Khandachakra	7
83	Tila Nadi	29.102971	81.714671	Suspended Bridge	In good conditon	65	1	1168.64	Mahawai	5
84	Tila Nadi, Tila Gufa	29.160408	81.842364	Suspended Bridge	In good conditon	87	1	1876.77	Tilagufa	5
85	Tila Nadi, Ratada	29.185588	81.890344	Suspended Bridge	In good conditon	85	1	1989.90	Tilagufa	1
86	Tila Nadi, Raachuli	29.164244	81.871062	Suspended Bridge	In good conditon	77	1	1932.26	Tilagufa	2
87	Tila Nadi	29.163453	81.829366	Concrete Bridge	Reuire reconstruction	30	7	1960.32	Tilagufa	6
88	Pipalchowk	29.095747	81.700779	Timber Bridge	Require replacement	3	1	1745.20	Mahawai	5
89	Nagma	29.197262	81.910319	Suspended Bridge	In good conditon	64	1	2018.47	Tilagufa	1
90	Paadamghat	29.097438	81.758455	Suspended Bridge	In good conditon	62	1	1478.93	Tilagufa	11
92	Thinke	29.108807	81.782193	Log Crossing	In good conditon	3	1	2131.49	Tilagufa	11
93	Odhanku	29.094131	81.751663	Suspended Bridge	In good conditon	80	1	1630.02	Mahawai	2
94	Pipalchowk	29.092723	81.710632	Log Crossing	In good conditon	4	1	1512.21	Mahawai	5
95	Kuni	29.096248	81.718741	Log Crossing	In good conditon	3	1	1543.91	Mahawai	5
96	Kuni	29.096926	81.731182	Log Crossing	In good conditon	2	1	1698.68	Mahawai	6

# Annex 13: Community Infrastructure maps of municipalities





Production Date: 3/9/2021



### COMMUNITY INFRASTRUCTURE MAP

#### Mahawai Rural Municipality, Kalikot, Karnali Province, Nepal

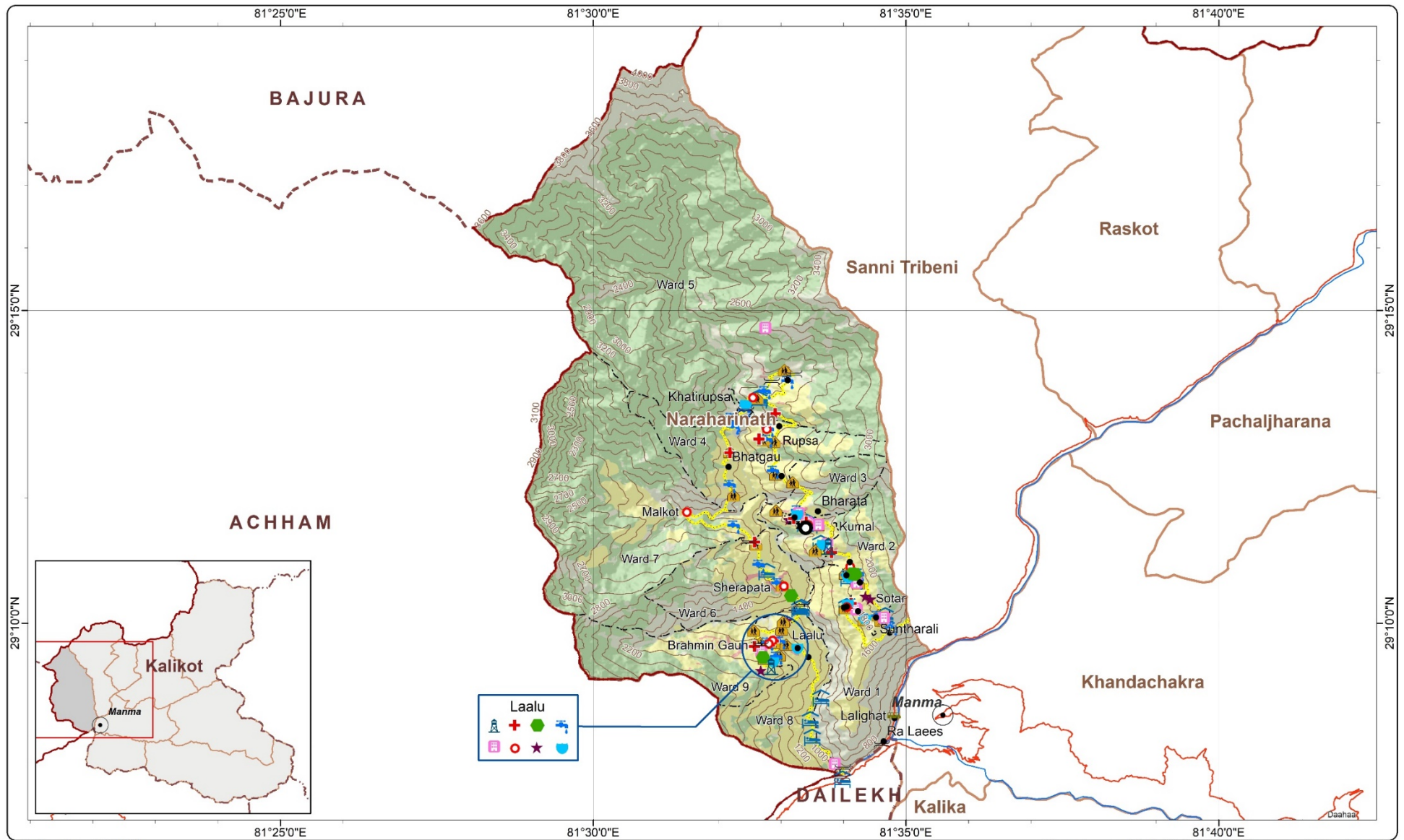
- |                             |                            |                   |                          |               |
|-----------------------------|----------------------------|-------------------|--------------------------|---------------|
| ● National Capital          | 🏫 Education Infrastructure | ⚡ Power House     | — Contour                | 🌲 Forest      |
| ⦿ District HQ               | 🚰 Public Tap               | 🌉 Bridges         | — International Boundary | 🌾 Agriculture |
| ⦿ Rural Municipality Office | 🏢 Business Center          | 🌊 River           | — Provincial Boundary    | 🏠 Settlement  |
| ⦿ Ward Office               | 🌳 Open Space               | 🛣 Highway         | — District Boundary      | 🌿 Grassland   |
| ● Settlement                | 🏛 Public Buildings         | 🛤 Main Trail      | — Municipal Boundary     | 💧 Water Body  |
| ⛶ Health Facilities         | ★ Religious Place          | ⋯ Secondary Trail | — Ward Boundary          |               |
|                             |                            | ⋯ Tertiary Trail  |                          |               |

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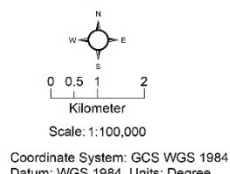
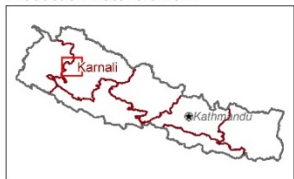
Data Sources: Field Survey (24 November-6 December 2020) WFP,OSM,Department of Survey Nepal

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Production Date: 3/9/2021



## COMMUNITY INFRASTRUCTURE MAP

### Naraharinath Rural Municipality, Kalikot, Karnali Province, Nepal

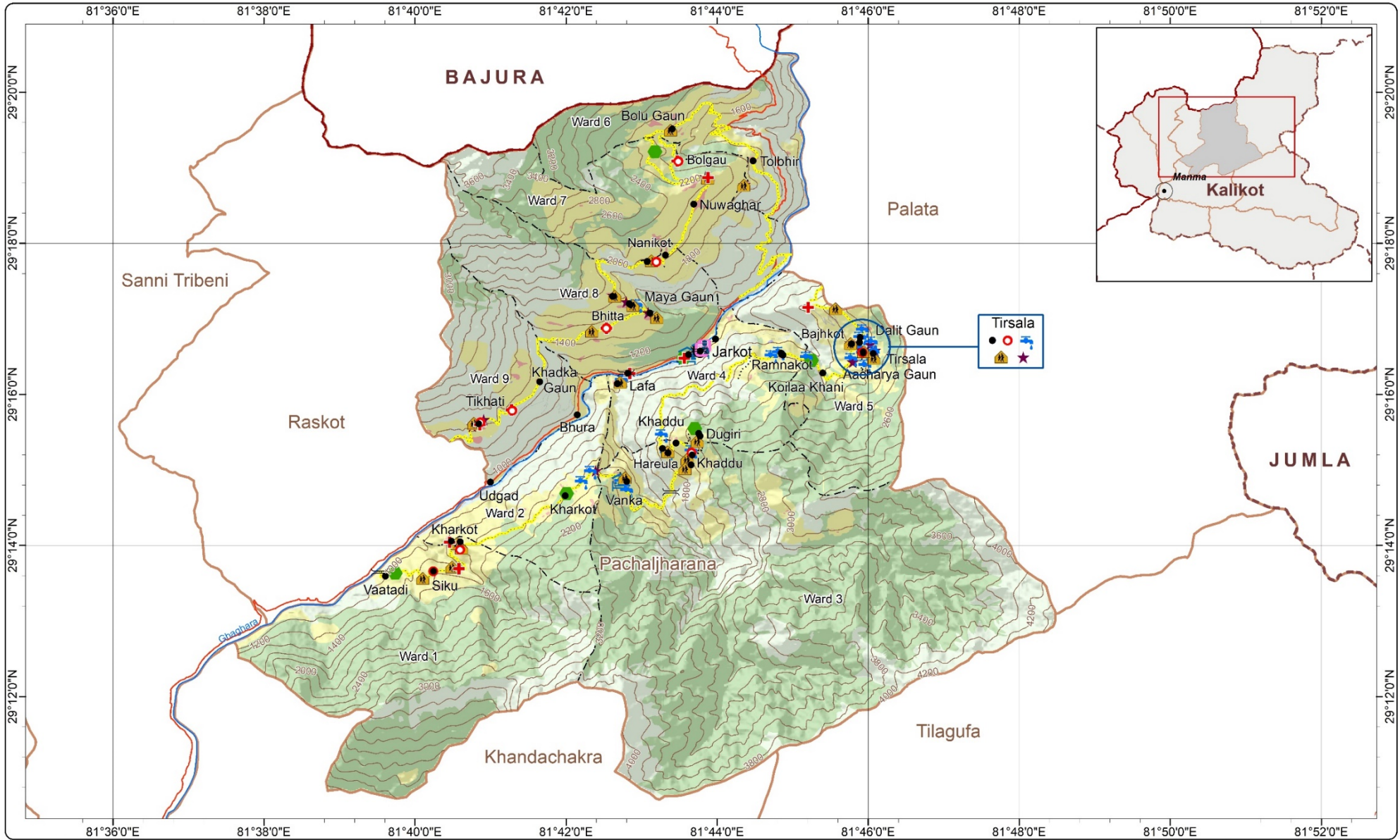
- |  |   |   |   |  |
|--|---|---|---|--|
| <ul style="list-style-type: none"> <li> National Capital</li> <li> District HQ</li> <li> Municipality Office</li> <li> Ward Office</li> <li> Settlement</li> <li> Health Facilities</li> </ul> | <ul style="list-style-type: none"> <li> Education Infrastructure</li> <li> Financial Institution</li> <li> Public Tap</li> <li> Water Tank</li> <li> Open Space</li> <li> Public Buildings</li> </ul> | <ul style="list-style-type: none"> <li> Business Centre</li> <li> Jeep Counter</li> <li> Religious Place</li> <li> Telecommunication Tower</li> <li> Bridges</li> </ul> | <ul style="list-style-type: none"> <li> River</li> <li> Highway</li> <li> Main Trail</li> <li> Secondary Trail</li> <li> Contour</li> <li> International Boundary</li> <li> Provincial Boundary</li> <li> District Boundary</li> <li> Municipal Boundary</li> <li> Ward Boundary</li> </ul> | <ul style="list-style-type: none"> <li> Forest</li> <li> Agriculture</li> <li> Settlement</li> <li> Grassland</li> <li> Rock Outcrop</li> <li> Water Body</li> </ul> |
|--|---|---|---|--|

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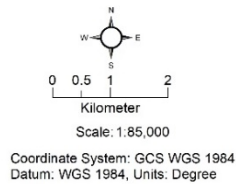
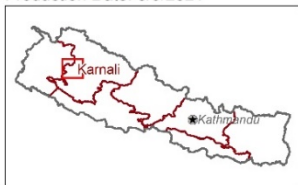
Data Sources: Field Survey (24 November-6 December 2020)  
WFP, OSM, Department of Survey Nepal

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Production Date: 3/9/2021



## COMMUNITY INFRASTRUCTURE MAP

### Pachaljharana Rural Municipality, Kalikot, Karnali Province, Nepal

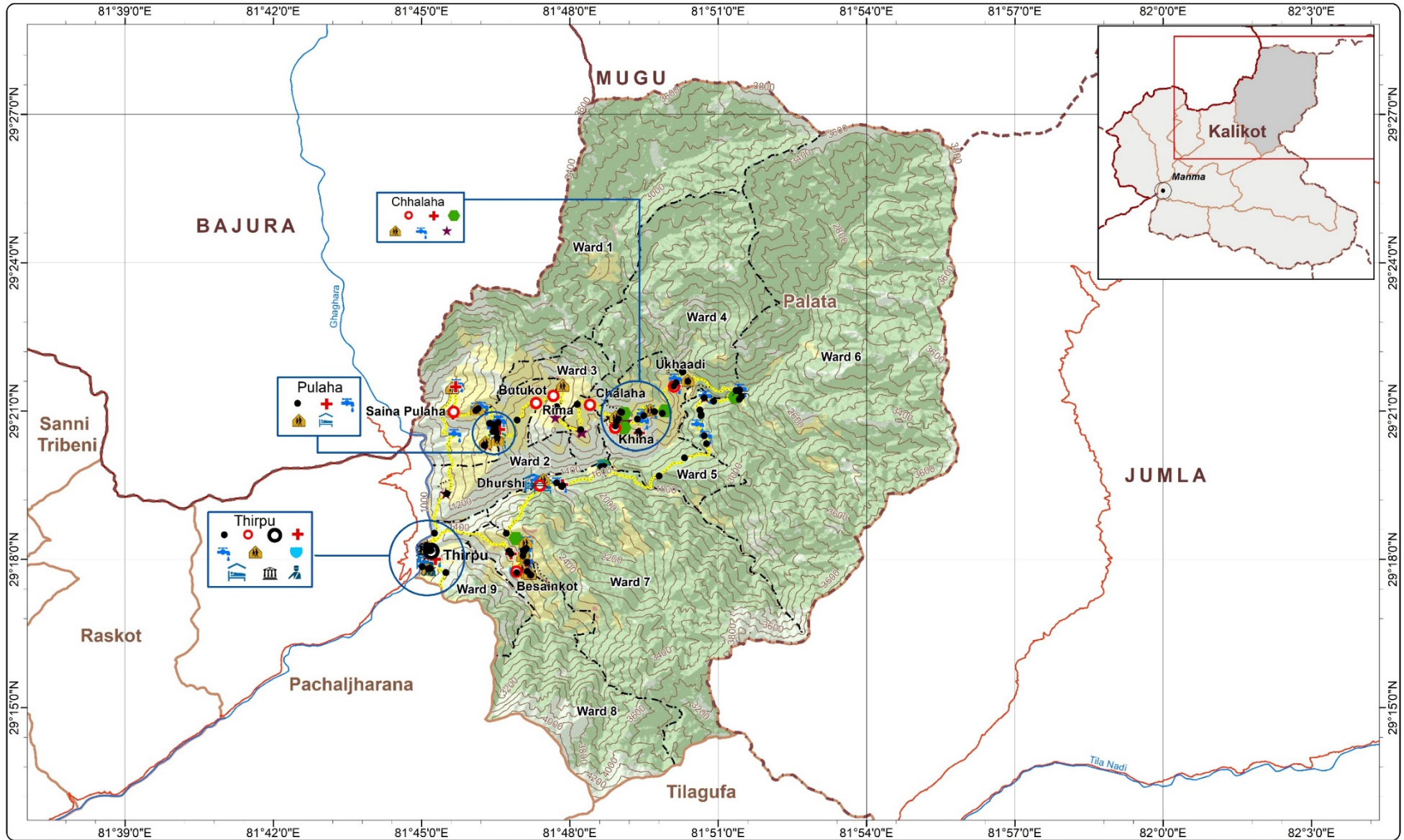
- |                             |                            |                    |                   |                          |               |
|-----------------------------|----------------------------|--------------------|-------------------|--------------------------|---------------|
| ★ National Capital          | ✚ Health Facilities        | ● Open Space       | — River           | — International Boundary | ■ Forest      |
| ○ District HQ               | 👮 Security                 | 🏠 Public Buildings | — Highway         | — Provincial Boundary    | ■ Agriculture |
| ⊙ Rural Municipality Office | 🎓 Education Infrastructure | 🏢 Business Centre  | — Main Trail      | — District Boundary      | ■ Settlement  |
| ⊙ Ward Office               | 🏦 Financial Institution    | ★ Religious Place  | — Secondary Trail | — Municipal Boundary     | ■ Grassland   |
| ● Settlement                | 🚰 Public Tap               | ⚖ Bridges          | — Contour         | — Ward Boundary          | ■ Water Body  |

This map is prepared by the Youth Innovation Lab as a part of deliverables under the Emergency Preparedness and Response (EPR) project activity "Trail and Community Infrastructure Mapping" implemented by the World Food Programme (WFP Nepal).

Data Sources: Field Survey (24 November-6 December 2020) WFP,OSM,Department of Survey Nepal

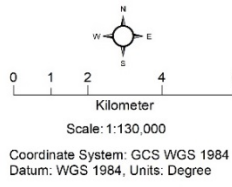
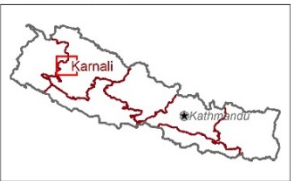
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### COMMUNITY INFRASTRUCTURE MAP Palata Rural Municipality, Kalikot, Karnali Province, Nepal



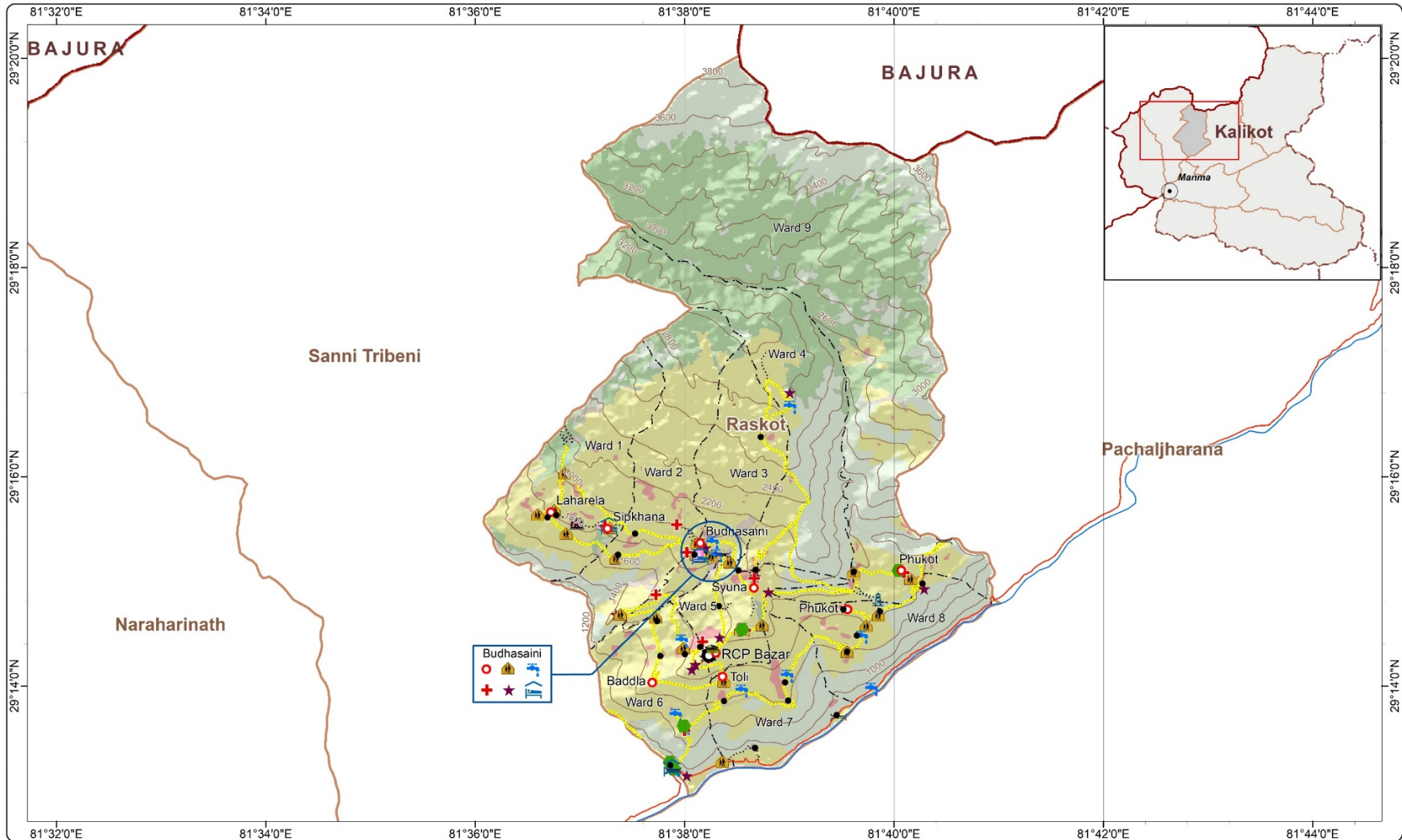
- |  |   |   |   |
|--|---|---|---|
| <ul style="list-style-type: none"> <li>★ National Capital</li> <li>● District HQ</li> <li>○ Municipality Office</li> <li>○ Ward Office</li> <li>● Settlement</li> <li>✚ Health Facilities</li> <li>👮 Security</li> <li>🏫 Education Infrastructure</li> <li>🏛️ Financial Institution</li> <li>🚰 Public Tap</li> <li>💧 Water Tank</li> <li>🌳 Open Space</li> </ul> | <ul style="list-style-type: none"> <li>🏪 Business Centre</li> <li>✳️ Religious Place</li> <li>🏠 Contour</li> <li>🌲 Forest</li> <li>🌾 Agriculture</li> <li>🏘️ Settlement</li> <li>🌿 Grassland</li> <li>💧 Water Body</li> <li>🛣️ Highway</li> <li>🛤️ Main Trail</li> <li>⋯ Secondary Trail</li> </ul> | <ul style="list-style-type: none"> <li>— International Boundary</li> <li>— Provincial Boundary</li> <li>— District Boundary</li> <li>— Municipal Boundary</li> <li>— Ward Boundary</li> </ul> | <ul style="list-style-type: none"> <li>🌲 Forest</li> <li>🌾 Agriculture</li> <li>🏘️ Settlement</li> <li>🌿 Grassland</li> <li>💧 Water Body</li> <li>🏠 Others</li> </ul> |
|--|---|---|---|

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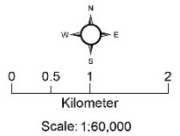
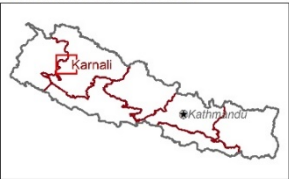
Data Sources: Field Survey (24 November-6 December 2020) WFP, OSM, Department of Survey Nepal

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Coordinate System: GCS WGS 1984  
Datum: WGS 1984, Units: Degree

## COMMUNITY INFRASTRUCTURE MAP

### Raskot Municipality, Kalikot, Karnali Province, Nepal

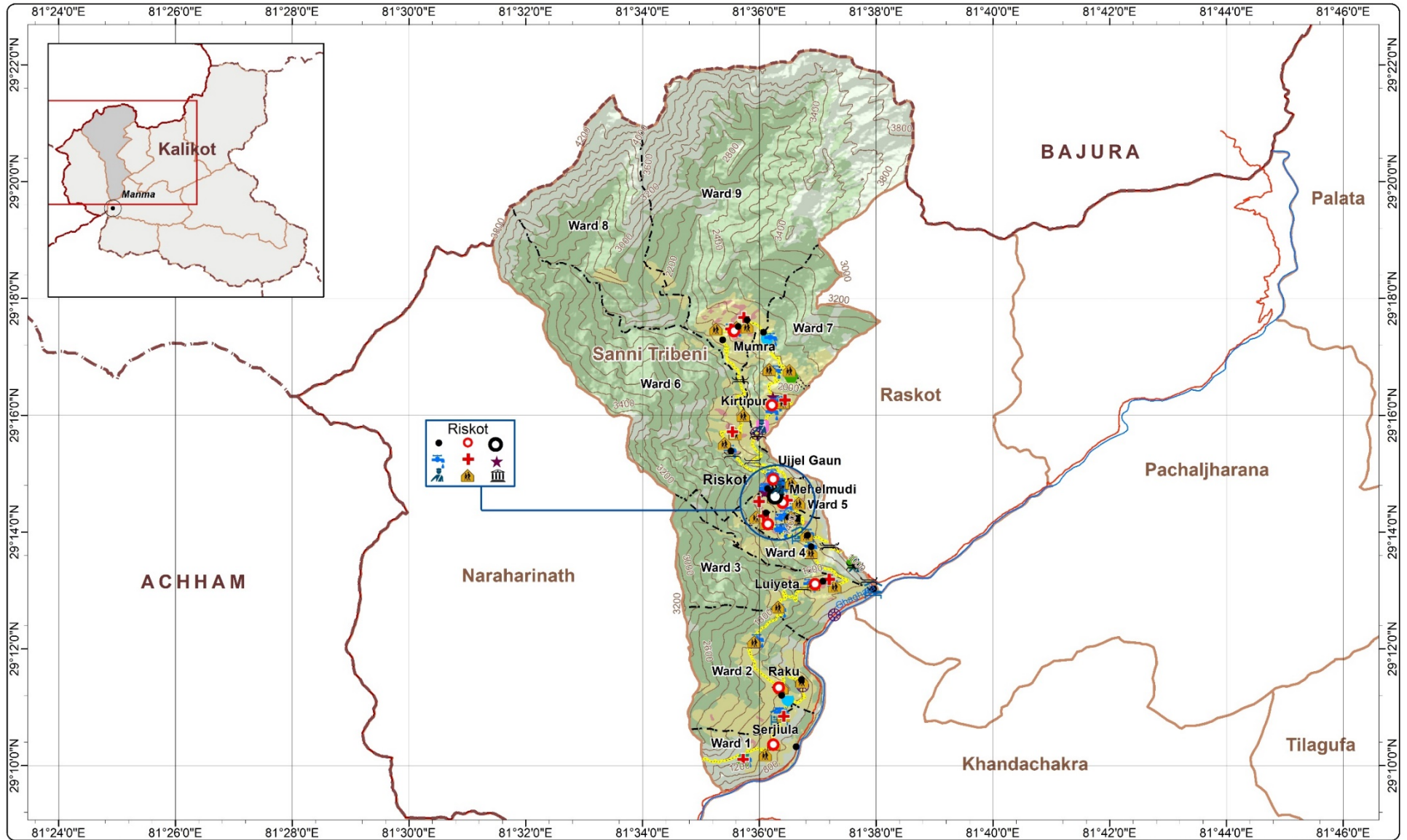
- |                       |                            |                           |                          |                |
|-----------------------|----------------------------|---------------------------|--------------------------|----------------|
| ● National Capital    | 🏠 Education Infrastructure | 🏢 Business Centre         | 🌊 River                  | 🌲 Forest       |
| ⦿ District HQ         | 🏦 Financial Institution    | 🚐 Jeep Counter            | 🛣 Highway                | 🌾 Agriculture  |
| ⦿ Municipality Office | 🚰 Public Tap               | ★ Religious Place         | 🛤 Main Trail             | 🏠 Settlement   |
| ⦿ Ward Office         | 💧 Water Tank               | 📶 Telecommunication Tower | ⋯ Secondary Trail        | 🌿 Grassland    |
| ● Settlement          | 🌳 Open Space               | 🌉 Bridges                 | — Contour                | 🪨 Rock Outcrop |
| ⛑ Health Facilities   | 🏛 Public Buildings         |                           | — International Boundary | 💧 Water Body   |
|                       |                            |                           | — Provincial Boundary    |                |
|                       |                            |                           | — District Boundary      |                |
|                       |                            |                           | — Municipal Boundary     |                |
|                       |                            |                           | — Ward Boundary          |                |

This map is prepared by the Youth Innovation Lab as a part of deliverables under the Emergency Preparedness and Response (EPR) project activity "Trail and Community Infrastructure Mapping" implemented by the World Food Programme (WFP Nepal).

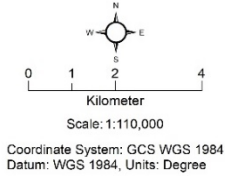
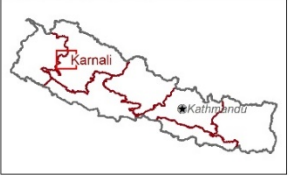
Data Sources: Field Survey (24 November-6 December 2020)  
WFP, OSM, Department of Survey Nepal

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### COMMUNITY INFRASTRUCTURE MAP

Sanni Tribeni Rural Municipality, Kalikot, Karnali Province, Nepal

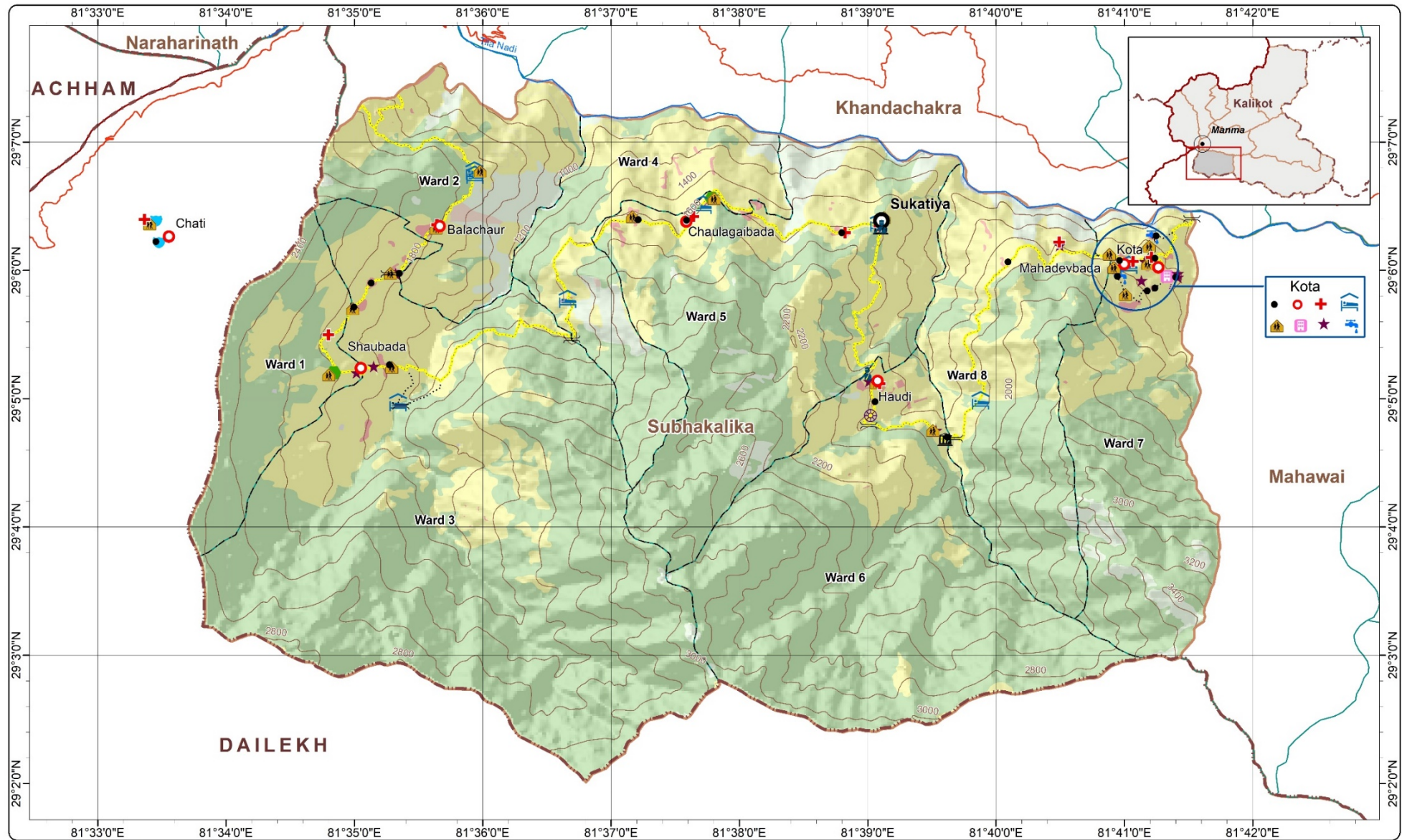
- |                        |                            |                   |                          |               |
|------------------------|----------------------------|-------------------|--------------------------|---------------|
| ★ National Capital     | 🏫 Education Infrastructure | ★ Religious Place | — Contour                | 🌲 Forest      |
| 🏛️ District HQ         | 🏢 Financial Institution    | ⚡ Power Plant     | — International Boundary | 🌾 Agriculture |
| 🏘️ Municipality Office | 🚰 Public Tap               | 🌉 Bridges         | — Provincial Boundary    | 🏠 Settlement  |
| 🏠 Ward Office          | 💧 Water Tank               | 🌊 River           | — District Boundary      | 🌿 Grassland   |
| ● Settlement           | 🌳 Open Space               | 🛣️ Highway        | — Municipal Boundary     | 💧 Water Body  |
| 🏥 Health Facilities    | 🏢 Public Buildings         | 🛤️ Main Trail     | - - - Ward Boundary      | 🏞️ Other      |
| 👮 Security             | 🏢 Business Centre          | ⋯ Secondary Trail |                          |               |

This map is prepared by the Youth Innovation Lab as a part of deliverables under the Emergency Preparedness and Response (EPR) project activity "Trail and Community Infrastructure Mapping" implemented by the World Food Programme (WFP Nepal).

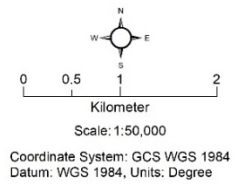
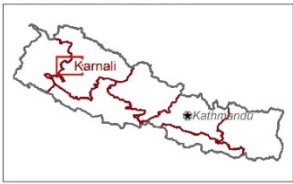
Data Sources: Field Survey (24 November-6 December 2020) WFP/OSM, Department of Survey Nepal

Field survey was carried out by trained local youths of Kalikot. GPS and OSM tracker application were used for data collection. Data were collected along the surveyed trail only.

The boundaries and names and the designations used on this map do not imply official endorsement or acceptance by the United Nations.



Production Date: 3/9/2021



## COMMUNITY INFRASTRUCTURE MAP

### Subhakalika Rural Municipality, Kalikot, Karnali Province, Nepal

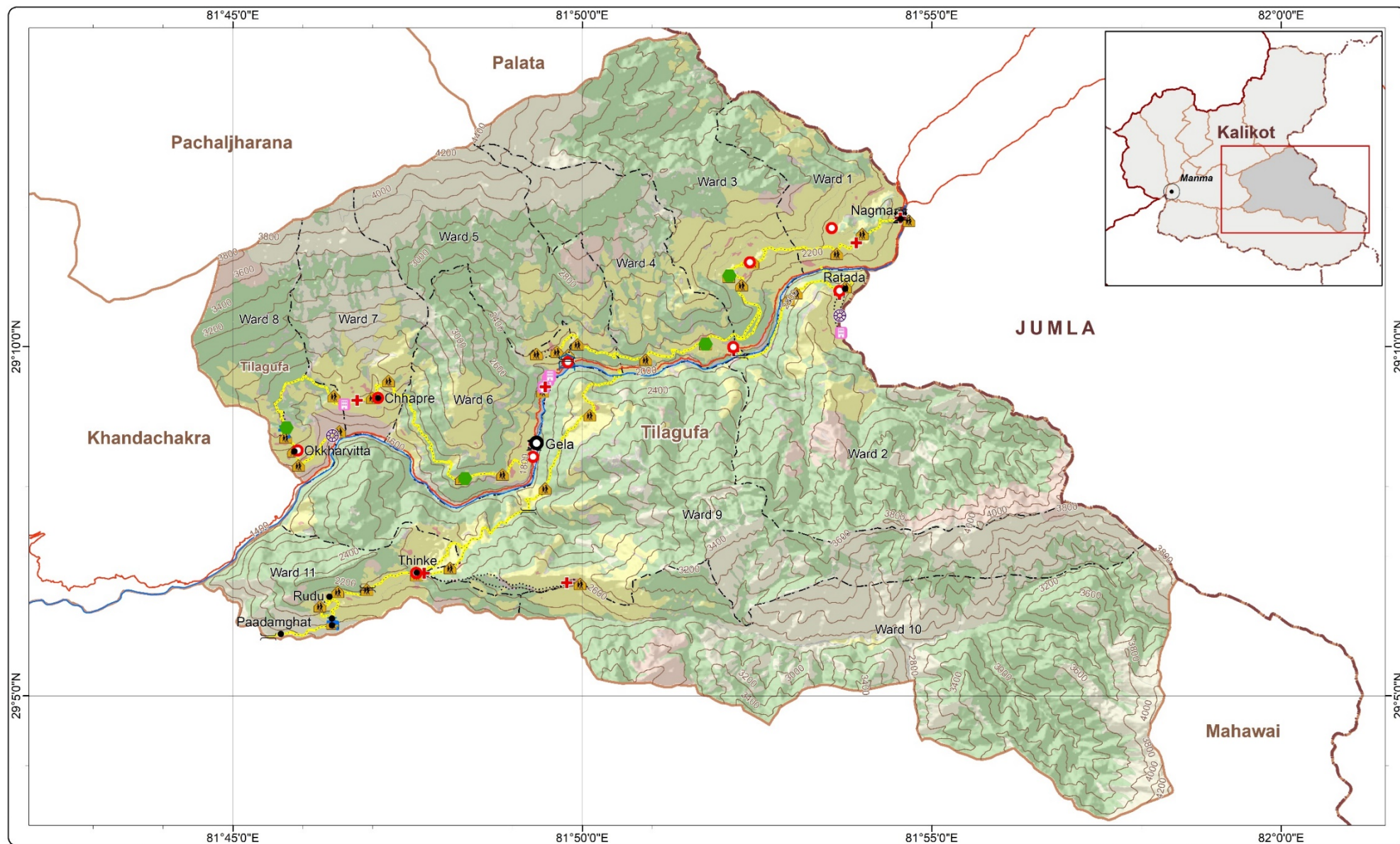
- |                        |                            |                   |                          |               |
|------------------------|----------------------------|-------------------|--------------------------|---------------|
| ★ National Capital     | 🏫 Education Infrastructure | ★ Religious Place | — Contour                | 🌲 Forest      |
| 🏛️ District HQ         | 🏦 Financial Institution    | ⚙️ Hydrostation   | — International Boundary | 🌾 Agriculture |
| 🏘️ Municipality Office | 🚰 Public Tap               | 🌉 Bridges         | — Provincial Boundary    | 🏠 Settlement  |
| 🏠 Ward Office          | 💧 Water Tank               | 🌊 River           | — District Boundary      | 🌿 Grassland   |
| ● Settlement           | 🌳 Open Space               | 🛣️ Highway        | — Municipal Boundary     | 💧 Water Body  |
| 🏥 Health Facilities    | 🏢 Public Buildings         | 🛣️ Main Trail     | — Ward Boundary          | 🏞️ Other      |
| 👮 Security             | 🏪 Business Centre          | ⋯ Secondary Trail |                          |               |
|                        |                            | ⋯ Tertiary Trail  |                          |               |

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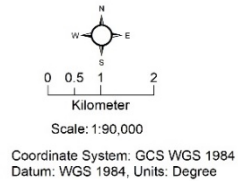
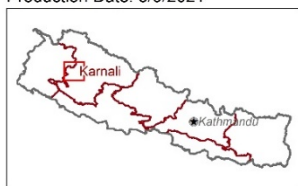
Data Sources: Field Survey (24 November-6 December 2020) WFP, OSM, Department of Survey Nepal

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Production Date: 3/9/2021



## COMMUNITY INFRASTRUCTURE MAP

### Tilagufa Municipality, Kalikot, Karnali Province, Nepal

- |                       |                            |                      |                          |                |
|-----------------------|----------------------------|----------------------|--------------------------|----------------|
| ★ National Capital    | 🏫 Education Infrastructure | 🏢 Business Centre    | 🌊 River                  | 🌲 Forest       |
| 🏛️ District HQ        | 🏦 Financial Institution    | ⚡ Power House        | 🛣️ Highway               | 🌾 Agriculture  |
| 🏢 Municipality Office | 🚰 Public Tap               | ⚙️ Religious Place   | 🛤️ Main Trail            | 🏘️ Settlement  |
| 🏠 Ward Office         | 🌳 Open Space               | 🌉 Bridges            | 🛤️ Secondary Trail       | 🌿 Grassland    |
| ● Settlement          | 🏢 Public Buildings         | — Contour            | — International Boundary | 🪨 Rock Outcrop |
| 🏥 Health Facilities   |                            | — District Boundary  | — Provincial Boundary    | 💧 Water Body   |
|                       |                            | — Municipal Boundary | — Ward Boundary          |                |

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Data Sources: Field Survey (24 November-6 December 2020) WFP, OSM, Department of Survey Nepal

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**Picture 1: Blasting work on Karnali Corridor**



**Picture 2: Marking of Junction Point**



**Picture 3: Trail to Manma bazar**



**Picture 4: Narrow width due to rock slide**



**Picture 5: Hello Nepal Tower, Manma**



**Picture 6: Raingauge Station, Tadi, Khandachakra Municipality**



**Picture 7: NTC tower**



**Picture 8: Telecom tower, Manma**



Picture 9: Educational Infrastructure



Picture 10: Financial Institution, Manma (BANK)



Picture 11: District Police Office, Manma



Picture 12: Financial Institution, Manma (COOPERATIVE)



**Picture 13: Log Crossing**



**Picture 14: Log Crossing**



**Picture 15: Log Crossing**



**Picture 16: Log Crossing**



**Picture 17: Landslide**



**Picture 18: Landslide**



**Picture 19: Slippery Way**



**Picture 20: Rocky and Bouldary**



**Picture 21: Narrow Way**



**Picture 22: Narrow Way**



**Picture 23: Narrow Trail**



**Picture 24: Narrow Trail**



**Picture 25: Staircase**



**Picture 26: Staircase**



**Picture 27: Taking GPS point of Municipality office**



**Picture 28: Municipality office, Khandachakra**



Picture 29: Municipality office



Picture 30: Public Toilet, Manma



Picture 31: COVID-19 Hospital, Manma



Picture 32: Taking GPS point of Educational Institute



**Picture 33: Taking information from Ward Representative**



**Picture 34: Taking GPS point of Public Buildings**



**Picture 35: District Coordination Committee, Manma**



**Picture 36: Taking GPS point of Public Tap**



**Picture 37: Taking GPS point of Public Tap**



**Picture 38: Public Tap**



**Picture 39: Public Tap**



**Picture 40: Water Distribution Tank**



**Picture 41: Irrigation Canal**



**Picture 42: Suspended Bridge**



**Picture 43: Suspended Bridge**



**Picture 44: Cause Way**



**Picture 45: Way to Religious Place (Temple)**



**Picture 46: Resting Place**



**Picture 47: Stream Crossing**



**Picture 48: Settlement**



**Picture 49: Serabada bazar, Khandachakra Municipality**



**Picture 50: Settlement**



**Picture 51: Landslide**



**Picture 52: Openspace**

