# Nepal Health Sector Support Programme III

# (NHSSP – III)

**Joint Hospital Assessment Report – Karnali Province**

**Mugu District Hospital**

**Final Draft 26 August 2019**

*Disclaimer: -*
*This material has been funded by UKaid from the UK government; however the views expressed do not necessarily reflect the UK government's official policies"*

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# 2 Introduction

## 2.1 Background

The Nepal Health Sector Support Programme 3 (NHSSP) is a four-year programme designed to support the Government of Nepal (GoN) in implementing the Nepal Health Sector Strategy (2015-2020). The NHSSP is funded by UK Aid / UK Department for International Development (DFID) and aims to enhance the capacity of the Ministry of Health and Population (MoHP) and Department of Urban Development and Building Construction (DUDBC) to build a resilient health system providing quality health services for all.

The health systems component of NHSSP provides support to the MoHP to improve health policy-making and planning, procurement and financial management, health services, and the use of evidence for planning and management. The NHSSP's infrastructure component focuses on strengthening the capacity of government to develop resilient health infrastructure able to withstand natural disasters and climate change-induced hazard. The NHSSP Health Infrastructure team comprises architects, engineers, and Geographical Information System (GIS) experts, operating in the following work areas:

- development/improvement of national and provincial health infrastructure policy
- promoting the use of a planned integrated approach to health infrastructure development
- development of appropriate standards and codes, including the national standards for health infrastructure, and codes for seismic retrofitting of health infrastructure
- building the capacity of MoHP in evidence-based health infrastructure policy-making and managing an integrated, resilient health service
- building the capacity of the DUDBC to develop, manage and maintain health infrastructure works more effectively and efficiently, and to build technical skills in specialist aspects of health infrastructure development including utility services, healthcare waste management, seismic retrofitting and procurement procedures
- providing technical support for the seismic and functional retrofitting of two major hospitals at Bhaktapur and Pokhara

In the context of the Nepal federal administrative structure, the NHSSP Health Infrastructure team is providing technical assistance to sub-national governments. It is assisting municipalities to develop short-, medium- and long-term interventions to improve health facilities.

Currently, the NHSSP health infrastructure team working with five Provincial Ministries of Social Development, primarily providing technical, design and planning support for improving health facilities. In Karnali Province the team is working jointly with USAID's Strengthening Systems for Better Health and Saving Newborn Lives (SSBHSNL). The SSBHSNL programme is supporting the assessment of human resources and service delivery in selected hospitals across the province, the NHSSP team is carrying out assessments on health infrastructure, connectivity and utilities.

## 2.2 Assessment Methodology and Process

The NHSSP team is guided by the following key principles in making assessments and recommendations for development of health infrastructure:

- Promoting integrated and efficient use of health infrastructure to provide better services to users
- Maximizing the use of existing facilities, and extending their operational life span where feasible and economic
- Improving operational efficiency and connectivity within the health facilities network, and promoting referrals to relevant facilities

- Promoting the use of and compliance with the Nepal Health Infrastructure Development standards 2017 (NHIDS) and the Standard Guidelines for the Development of Health Infrastructure 2017

A technical team from the Nepal Health Sector Support Programme 3 (NHSSP) carried out a field assessment at Mugu District Hospital in 24 November 2015, as part of oversight and supervision of the upgrading project between the Ministry of Health and Population (MoHP) and the Korean International Cooperation Agency (KOICA).

The general methodology can be summarised as:

**2.2.1 Collection of data and information:** Collection of secondary data on the hospital from sources including DoHS, Department of Urban Development & Building Construction (DUDBC) records, Provincial Ministry of Social Development (MoSD) – Divisional Offices and Provincial Project Implementation Units, hospital records, reports from previous project consultants.

**2.2.2 Field assessment tools**: The NHSSP team used its standard checklist and needs assessment tool to gather information on buildings on the site.

**2.2.3 Field assessment exercise:** The NHSSP technical experts carried out a field assessment, on 24 November 2015, facilitated by the hospital management.

**2.2.4 Consultation meetings:** The NHSSP team have engaged closely with the Provincial Minister, representatives of the MoSD, hospital management, staff, the local authority and other relevant stakeholders to secure information on proposed developments, operational requirements, catchment areas, road networks, and future plans.

**2.2.5 Analysis of data and information:** The NHSSP team analysed the primary and secondary data against a range of factors, including Health Infrastructure Information System (HIIS) data, Geographical Information System (GIS) maps, existing drawings, health facility standards and categories drawn from Nepal Health Infrastructure Development Standards (NHIDS). This analysis identified infrastructure and service delivery gaps, problems and key issues.

In addition, the NHSSP team provided technical support and oversight to KOICA in the design and implementation of the Mugu hospital upgrade.

# 4 Infrastructure (NHSSP)

## 4.1 Site, buildings and existing situation

### Location

Mugu District Hospital is located in Nigale, Chhayanath Rara Nagarpalika, Mugu (see Figure 1). The hospital directly serves a population of 15,339 living within a 7 km radius, and has a dependent population of over 55,000 people (see Table 1 and Figure 2). Consequently the hospital has been designated as a Primary A3 type hospital

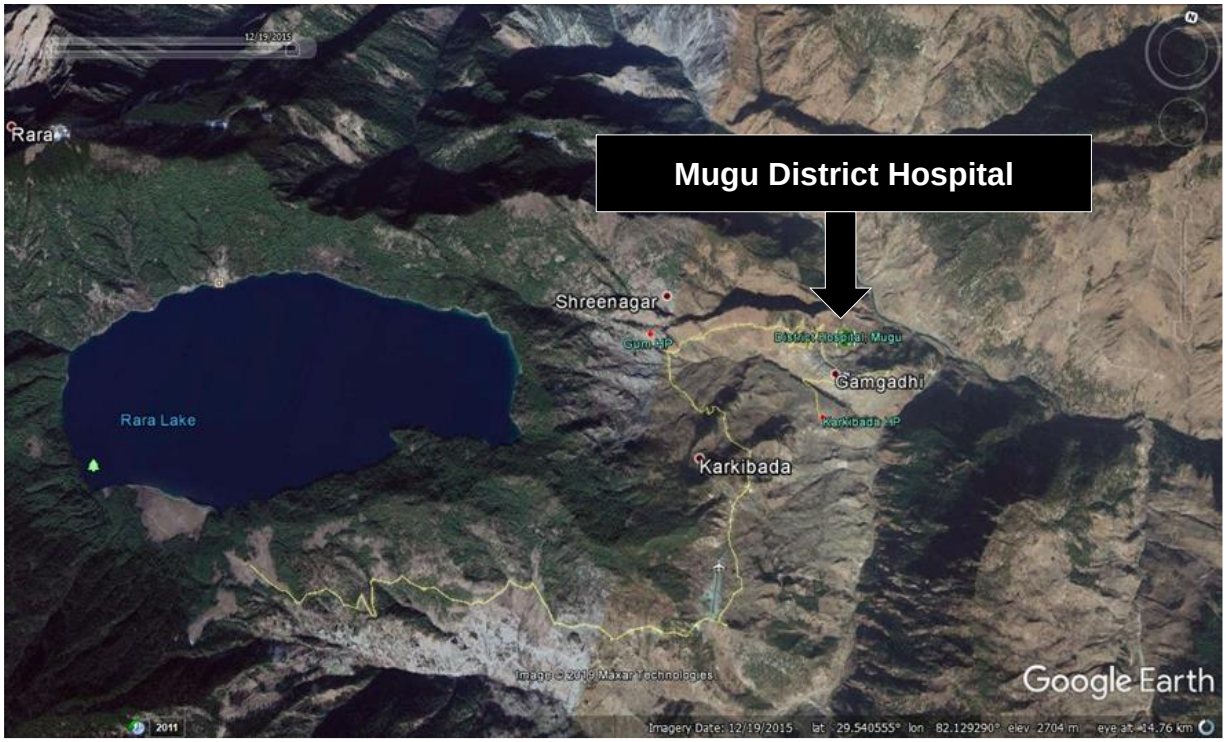


Figure 1: Mugu District Hospital Location

### Dependent Population and Catchment

| SN | Hospital | Dependent Population | Catchment Population | Categorized Status |
|---|---|---|---|---|
| 1 | Mugu District Hospital | 55,418 | 15,339 | Primary Hospital Type A 3 |

Table 1: Mugu District Hospital Dependent Population

There is a pronounced west-east axis to the distribution of the population dependent on referrals to the Mugu District Hospital (see Figure 2), determined accessibility and major topography in this mountain region.

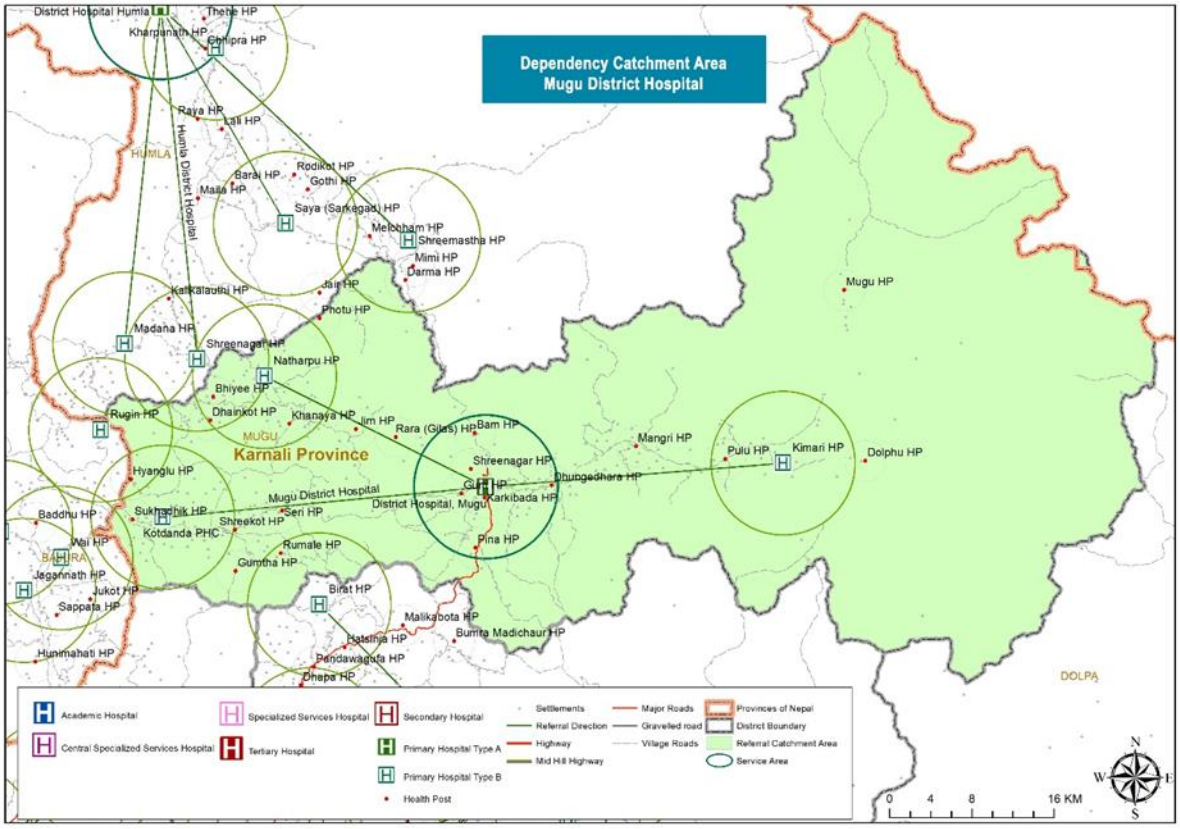


Figure 2: Mugu District Hospital Referral Catchment Area

**Hospital precinct**

The hospital site size is 12 ropani / 0.6 ha, and comprises 18 buildings (see Table 2).

| SN | Function | Building Type | Construction Date | Storeys |
|---|---|---|---|---|
| 1 | Staff Quarter | Stone Masonry with CGI sheet roof | 2064 BS / 2007 | 1 |
| 2 | Doctor Quarter | RCC Frame Structure | 2071 BS / 2014 | 1 |
| 3 | Store x 2 | Stone Masonry with CGI sheet roof | - | 1 |
| 4 | Doctor Quarter | Stone Masonry with CGI sheet roof | 2052 BS / 1955 | 1 |
| 5 | Administration | Stone Masonry with CGI sheet roof | 2042 BS / 1985 | 1 |
| 6 | Training Hall | Stone Masonry with CGI sheet roof | 2039 BS / 1982 | 1 |
| 7 | Nurse Quarter x 4 | Stone Masonry with CGI sheet roof | 2042 BS / 1985 | 1 |
| 8 | Toilet x 4 | Stone Masonry with CGI sheet roof | 2042 BS / 1985 | 1 |
| 9 | Canteen | Stone Masonry with CGI sheet roof | 2055 BS / 1998 | 1 |
| 10 | Post-mortem | RCC Frame Structure with RCC roof | 2071 BS / 2007 | 1 |
| 11 | Main Building | RCC Frame Structure with RCC roof | 2074 BS / 2017 | 2 |
| Notes:<br>CGI : Corrugated Galvanised Iron RCC: Reinforced Cement Concrete | | | | |

Table 2: Schedule of buildings at Mugu District Hospital

**Current Master Plan and Construction**

The Hospital is currently being significantly re-modelled, and outdated facilities being demolished and replaced with a modern hospital block to bring the facility up to Primary A3 level. The new building replaces outdated structures that have been demolished and accommodates the following functions (see Figure 5):

- Emergency services
- Diagnostics – Ultrasonography (USG), Electrocardiogram (ECG), X-ray, Pathology
- Comprehensive Emergency Obstetric and Neo-natal Care unit (CEONC)
- Out-patient Department (OPD)
- In-patient wards
- Central Sterile Supplies Department (CSSD)
- Administration
- Ancillary functions

Development is guided by the Master Plan shown in Figure 3 below.

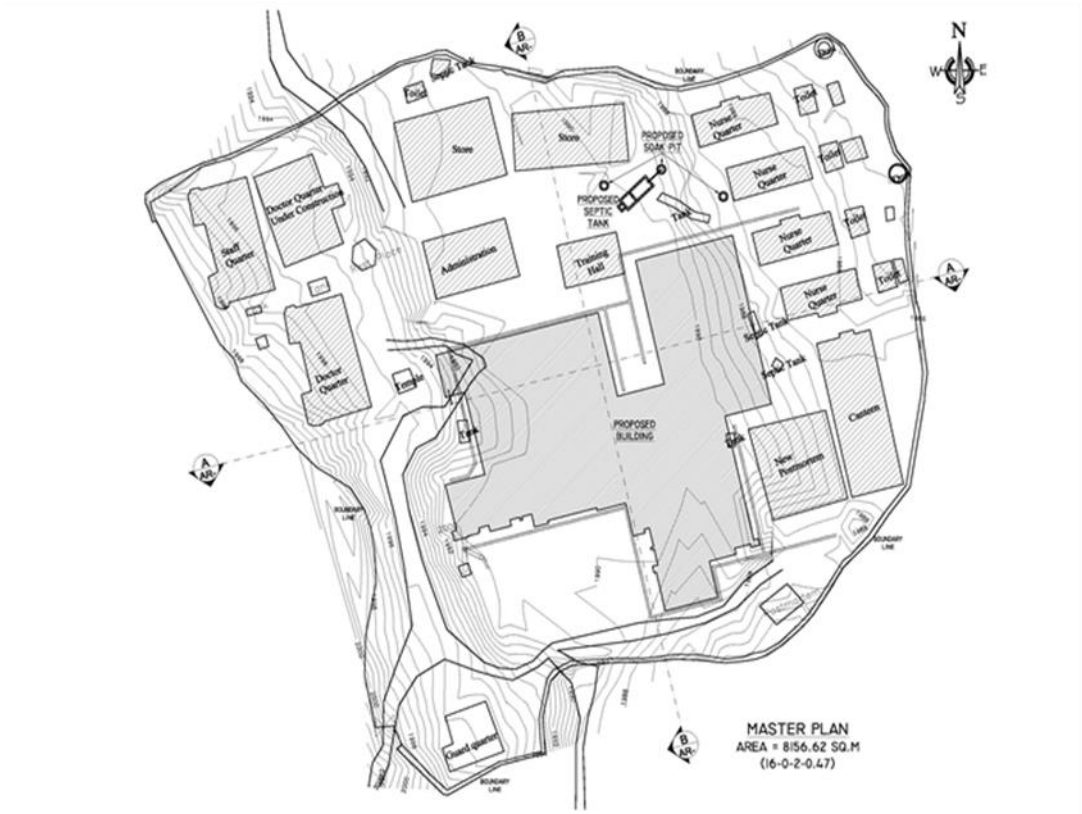


Figure 3: Master Plan for current development of Mugu District Hospital

The integrated hospital building project is being undertaken by the Korea International Cooperation Agency (KOICA) - currently 93% of the work has been completed and KOICA is planning to hand over the building in September 2019. The project consists of building construction as well as the supply of medical equipment (see Figure 4 and 5).

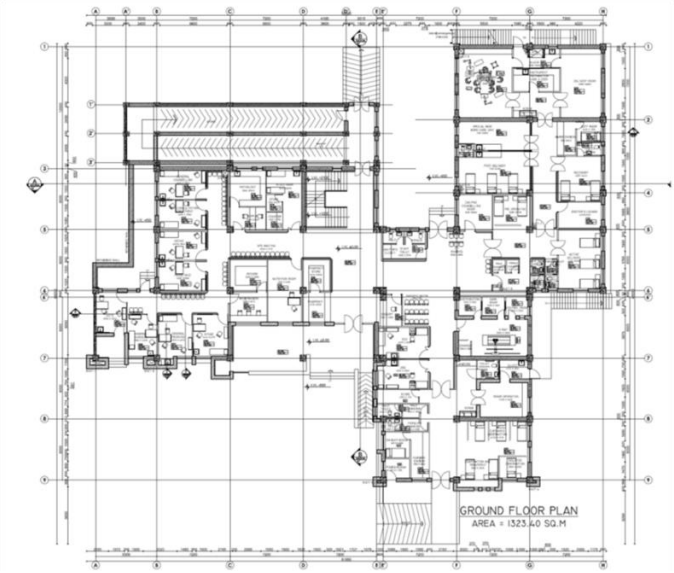


Figure 4: Layout plan (ground floor) of new hospital block, Mugu District Hospital

Figure 5: Mugu District Hospital – before upgrading (left) and current state of construction (right)

## 4.2 Assessment Findings and Gap Analysis

The original upgrade concept for the hospital involved a comprehensive upgrade of all elements. As well as provision of the new dedicated hospital block, complementary works were intended to address the following issues:

- There is no public toilet block on the site.
- The hospital has no boundary wall and gatehouse. Cattle walk into the hospital precinct, causing sanitation problems, damaging infrastructure and increasing the risk of zoonotic disease.
- There are problems with the main electricity power supply, including cut-outs and surges that affect service provision and damage medical equipment.
- Drainage at the west side of the precinct is poor, and heavy rains often cause flooding on the site.
- The approach road to the hospital has deteriorated, is narrow and will not meet the increased usage after the new block is complete

However, cost overruns have reduced the project finance available, and these works remain uncommitted.

## 4.3 Interventions

The NHSSP team has supported the preparation of drawings and estimates for these works, which have been submitted to the Provincial MSD for consideration. With the support of the Department of Urban Development and Building Construction's Federal Project Implementation Unit (FPIU), these could be quickly checked, revised if necessary, amnd taken forward into the tender process.

The list of proposed additional works to address the problems at the site is set out below, with an estimated cost.

| Building / Function | Works | Cost NPR |
|---|---|---|
| Approach road widening and upgrading | The hospital approach road is too narrow to meet the increased demand after the new block is complete, and should be upgraded. | 20 000 000 |
| Public Toilet Block | Construction of new detached toilet block | 38 000 000 |
| Retaining wall to improve drainage | Construct embankment / retaining wall | 3 50 00 000 |
| Boundary wall and gate | Construct wall around perimeter of precinct, with entrance gate. | |
| Transformer 250KV | Install new 250KV transformer | 12 35 000 |
| **Total** | | **4 20 35 000** |

## 4.4 Conclusion

Mugu District Hospital is an important component of the local health facility network in this remote District. The works proposed by the NHSSP team comprise the outstanding components for the integrated development of the hospital precinct. These works are complementary to the construction of the new hospital block, and will improve the overall operation of the precinct. Designs and estimates already exist, and can be quickly updated if necessary. Lead-in time to issuing tenders would be relatively short. The works represent a quick-win intervention, as well as continuing a relationship between the provincial government and a key External Development Partner (EDP).