

Sisneri

Water Supply Project



Government of Nepal
Ministry of Water Supply



Background

Kathmandu Valley currently necessitates additional water supply projects to adequately meet the growing demand for water. Identifying this need, the proposal to develop Sisneri Water Supply Project has emerged. This initiative aims to establish a resilient infrastructure capable of efficiently harnessing and transporting a significant volume of water, specifically 140 million liters per day (MLD). The project plans to source water from Kulekhani and Kogate rivers, with potential augmentation from the Kulekhani Reservoir using a dam-based reservoir mechanism.



Sector

Water Supply



Location

Indrasarovar & Bhimphedi Rural Municipality
Makawanpur District, Bagmati Province



Land Type

Government/Private

Salient Feature

- **Dam storage with pumping from Sisneri Dam to Sisneri Reservoir Tank (RT) and then under gravity up to Water Treatment Plant (WTP) proposed at Makhubesi and then pumping up to Sainbu RT.**
- **Expected Yield: 140 MLD for 5 months and 80 MLD for 7 months**
- **Treatment System: Conventional type treatment plant of capacity 140 MLD with flocculation and sedimentation units + RS Filter + Disinfection**
- **Dam across Kulekhani river at Sisneri:**
 - Type: Reinforced concrete
 - Dam height: 65 meters
 - Crest length: 162 meters
 - Spillway: Gated spillway of size 8*12 meters
- **Total Pipeline Length: 32.71 km**
- **Weir type intake structure for Kogate river**
- **Type of Source: Surface/Rainwater impounding**

Rationale:

- Utilize water resources through dam-based reservoir to fulfill water demand
- Compliments existing water supply initiatives
- Strategic location and distance to serve a significant population of Kathmandu Valley

Project Components



RCC dam



Intake
Structure



Water Conveyance System
with Two Stage Pumping



Water Treatment
System

Project Outcomes



Meets the Water Demand
of 1.4 million People



Water
Security



Improved Water
Quality

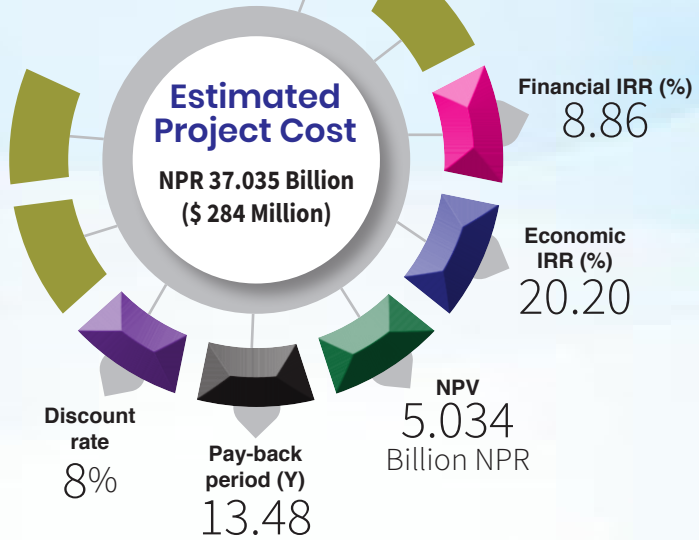


Improved Access to
Clean Water



Enhanced Water
Supply Resilience

Financial Indicators



Note: 1 USD = 130, 2023

(Information is based on Feasibility Study report prepared in 2023)

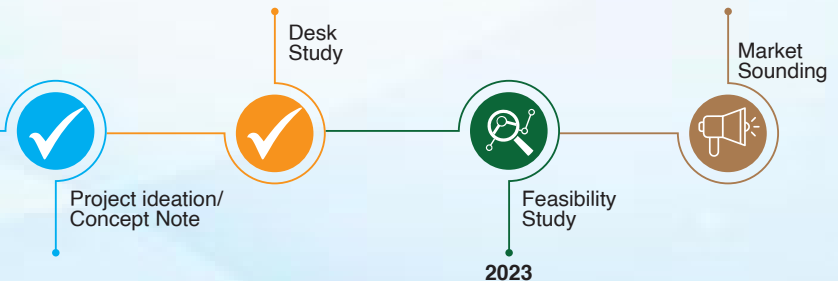
Project Implementation Modality

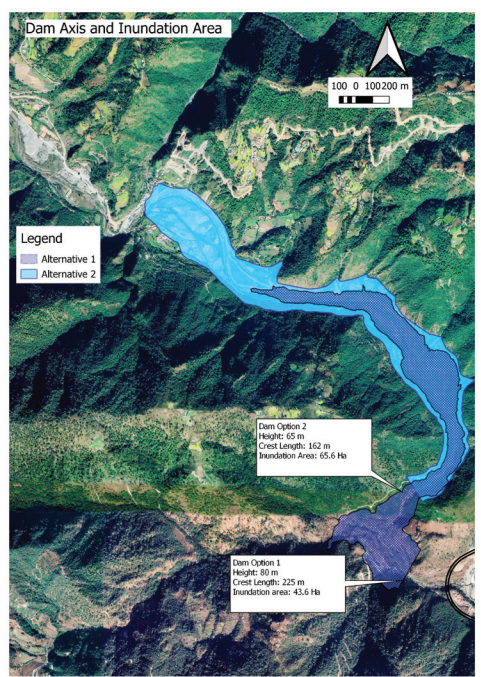
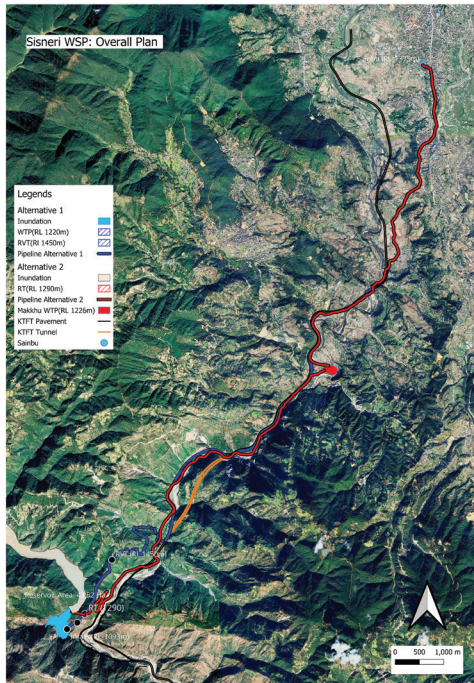


Public Private Partnership (PPP)

Build, Operate, Transfer (BOT)

Project Implementation Timeline





Relevant Agencies

- Ministry of Water Supply
- Kathmandu Valley Water Supply Management Board
- Investment Board Nepal

About the Agency

The Ministry of Water Supply is the leading executive agency in the sector that formulates federal-level policy, carrying a vision of assuring safe and accessible water and sanitation services and hygiene. The ministry is committed to putting efforts to achieve many national and international goals and targets in water, sanitation, and hygiene, intended for the betterment of people's living standards. Among its key objectives is the implementation of national-level large water supply projects and inter-provincial water supply projects. By spearheading these initiatives, the ministry aims to address critical water supply challenges and improve the overall water infrastructure across the country, thereby contributing to the well-being and prosperity of its citizens.

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