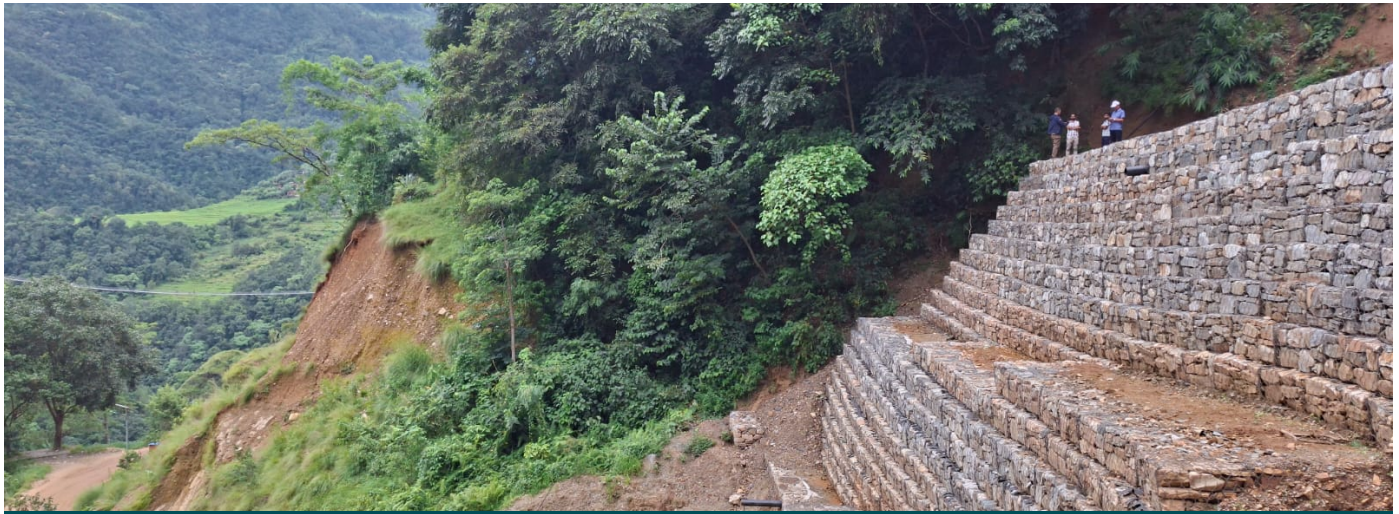


Slope Stabilization Works in Deurali Chwok - Suldada-Gahate Road, Baglung, Nepal

Gandaki, Baglung, Nepal



TYPE OF PROJECT

Reinforced Soil Walls And
Slope Reinforcement

YEAR OF CONSTRUCTION

2025

CLIENT

Department Of Local
Infrastructure Local
Infrastructure Local
Development Project
Office, Pokhara

CONTRACTOR

Muktinath Nirman Sewa

DESIGNER

Maccaferri

PROD. RELATED

TerraMesh (520 Units), MonoAxial GeoGrids (Paralink - 3821.4 Sqm), Drainage Geocomposites (MacDrain W - 399 Sqm), Nonwoven Geotextiles (MacTex N - 1217 Sqm)

Challenge

Frequent landslides along the Suldanda–Baglung road corridor were causing recurring obstructions to vehicular movement and posing significant risks to road users. The affected stretch also experienced road subsidence due to the presence of highly saturated and unstable slope material, leading to loss of ground support and reduced roadway stability. Considering the challenging terrain and varying embankment heights ranging from 6 m to 12 m over an approximate 40 m stretch, a robust and adaptable solution was required to restore slope stability and ensure long-term road safety and serviceability.



Before Construction



During Excavation

Solution

To reclaim the landslide-affected area and restore roadway stability, a retaining structure was identified as a critical requirement for the site. After evaluating various retaining solutions, Maccaferri's Paramesh System was adopted as the most cost-effective, sustainable, and technically suitable solution for the project, accommodating wall heights of up to 12 m.

The Paramesh System is a composite reinforced soil structure comprising ParaLink high-strength geogrids as primary reinforcement and Terramesh units as the fascia. ParaLink is manufactured using high-tenacity polyester yarn tendons encapsulated within a durable polyethylene sheath, providing excellent long-term strength and durability. The Terramesh units consist of gabion facings integrated with a double-twisted wire mesh tail, acting as secondary reinforcement and ensuring overall structural stability. To enhance the performance of the system, MacTex nonwoven geotextile was installed behind the Terramesh facing units to prevent erosion and migration of structural backfill material through the gabion fascia. In addition, MacDrain geocomposite drainage layers were provided at the interface between the in-situ ground and the reinforced fill to intercept groundwater seepage, thereby reducing pore water pressure and improving the long-term stability of the reinforced soil structure.

Compared to conventional RCC or stone masonry retaining walls, the Paramesh System offered significant advantages in terms of constructability, economy, and sustainability, particularly for high retaining structures in challenging terrain. The permeable gabion facings minimized hydrostatic pressure buildup, while the inherent flexibility of the reinforced soil system enabled it to withstand differential settlement and seismic activity without compromising structural integrity. Furthermore, the use of natural stone-filled gabion facings ensured minimal environmental impact and allowed the structure to blend harmoniously with the surrounding landscape.



During Excavation



After Completion



OPEN GOOGLE MAPS



OPEN GOOGLE EARTH