Sunga Community Constructed Wetland — Reed-Bed Treatment of Municipal Wastewater in Madhyapur Thimi (Nepal)

PES & Nature-Based Solutions · Good practice · Nepal

Quality score: 27/100

Evidence strength: Cautionary / limited

Summary

Sunga's community reed-bed wetland (300 m², US$31,500) has treated Thimi sewage since 2005. UN-Habitat recorded BOD falling from 950 to 30 mg/l (2006), but an independent 2007 study found only 56% BOD removal, so performance depends on regular desludging.

Key dimensions

Dimension	Score
Carbon — sequestration / storage, evidenced	0/3
Biodiversity — conservation / improvement, evidenced	0/3
Water & soil — retention, infiltration, erosion control	2/3
Fire resilience — risk reduction, evidenced	0/3
Governance, certification & transferability	2/3

Evaluated by C-NAPSE

Data sources

C-NAPSE web research — accessed 2026-11-11

Environment and Public Health Organization (ENPHO) with Madhyapur Thimi Municipality and UN-Habitat — accessed 2026-11-11

UN-Habitat (2008) Constructed Wetlands Manual — Sunga case, §9.4 — accessed 2026-11-11

Murthy et al. (2007) Performance of some constructed wetlands in Nepal — Linnaeus University Eco-Tech — accessed 2026-11-11

Gurung et al. (2017) Status of Constructed Wetlands in Nepal — Journal of Wetlands Research — accessed 2026-11-11

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