

Green Riyadh — Treated-Wastewater Urban Afforestation Without a Published Delivery Record

PES & Nature-Based Solutions · Good practice · Saudi Arabia

Quality score: 20/100

Evidence strength: Cautionary / limited

Summary

Riyadh's US\$11bn programme targets 7.5m trees by 2030, irrigated by treated wastewater. No cumulative delivery figure has ever been published, and peer-reviewed Landsat studies found no vegetation gain and no cooling through 2022-23.

Key dimensions

Dimension	Score
Carbon — sequestration / storage, evidenced	0/3
Biodiversity — conservation / improvement, evidenced	1/3
Water & soil — retention, infiltration, erosion control	1/3
Fire resilience — risk reduction, evidenced	0/3
Governance, certification & transferability	1/3

Evaluated by C-NAPSE

Data sources

C-NAPSE web research — accessed 2026-08-20

Royal Commission for Riyadh City (RCRC) — accessed 2026-08-20

Imam (2023) — Landsat NDVI/LST test finding no greening or cooling — accessed 2026-08-20

Elkatoury & Alazba (2024) — irrigation water demand management, *Water* 16(24):3559 — accessed 2026-08-20

Alfarhood et al. (2025) — monitoring limitations, *Sustainability* 17(13):6118 — accessed 2026-08-20

Miah et al. (2026) — Landsat 1993-2023 vegetation and LST, *World* 7(3):49 — accessed 2026-08-20

Qwaider et al. (2026) — green space growth and inequity, *Urban Science* 10(6):319 — accessed 2026-08-20

Arab News (Dec 2022) — official targets and campaign launch — accessed 2026-08-20

Zawya Projects — treated-effluent pipeline award expected Q1 2027 — accessed 2026-08-20

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