Cotai Ecological Zone — Macao's 55-Hectare Mangrove Reserve Where Wintering Black-Faced Spoonbills Fell 75% in Five Years (A Cautionary Case)

PES & Nature-Based Solutions · Good practice · Macao

Quality score: 13/100

Evidence strength: Cautionary / limited

Summary

Macao's ~55 ha Cotai Ecological Zone hosts nearly 200 recorded bird species and gets yearly mudflat works, but the January census of endangered black-faced spoonbills fell from 53 (2019) to 13 (2024) as casinos and infrastructure crowded the site.

Key dimensions

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

Evaluated by C-NAPSE

Data sources

C-NAPSE web research — accessed 2026-11-19

Environmental Protection Bureau (DSPA), Macao SAR Government — accessed 2026-11-19

Macao Government Information Bureau — Cotai Ecological Reserve (2026) — accessed 2026-11-19

Hong Kong Bird Watching Society — Black-faced Spoonbill Census 2024 — accessed 2026-11-19

Sichuan Journal of Zoology 34(2) — infrared-camera spoonbill monitoring in Macao — accessed 2026-11-19

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