ACROS Fukuoka Step Garden — A 30-Year Terraced Rooftop Forest Cooling Downtown Fukuoka (Japan)

PES & Nature-Based Solutions · Good practice · Japan

Quality score: 33/100

Evidence strength: Cautionary / limited

Summary

Since 1995 a 13-tier, 5,400 m² planted terrace on a 60 m Fukuoka building has grown from 76 to about 200 tree species. Measured surfaces run ~15°C cooler than concrete by day, with night-time cool-air flow into the adjoining park; monitoring is not peer-reviewed.

Key dimensions

Dimension	Score
Carbon — sequestration / storage, evidenced	1/3
Biodiversity — conservation / improvement, evidenced	2/3
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 2026-11-14

ACROS Fukuoka (Fukuoka Prefectural International Hall) — accessed 2026-11-14

A-PLAT (NIES) case study: ACROS Fukuoka Step Garden — accessed 2026-11-14

Japan for Sustainability: cooling effect of ACROS rooftop garden (2003) — accessed 2026-11-14

ACROS Fukuoka — Step Garden facility guide — accessed 2026-11-14

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