River Monitor — independent monitoring of Mekong dams and river levels

Funder factsheet · generated 2026-11-03 · AI Cubed (Luke Fairweather) · MVP preview, not for operational decisions

River Monitor measures reservoir water area for upstream Mekong dams from free satellite radar and pairs it with public river-gauge data, so people downstream can see what dams are doing when that data is not shared. Every figure below is cited.

Why it matters

• Nearly 65 million people live in the Lower Mekong Basin; an estimated 80% depend on the river and its resources for their livelihoods.[1]

• About 40% of the Lower Mekong Basin's people live within 15 km of the Mekong mainstream.[2]

• The Mekong's annual fish catch is about 2.3 million tonnes; MRC values Lower Basin capture fisheries at around USD 11 billion a year.[3]

• Fish provides 81% of protein intake in Cambodia and 48% in Lao PDR.[3]

What we monitor today

• 5 Lancang dams tracked by our own Sentinel-1 radar water-area series (2017-01 to 2026-10; 590 reservoir-months)[4]

• 8 MRC mainstem gauges tracked daily; 88,055 gauge-days of public MRC data[5]

• 7 of 8 gauges below their 10th percentile for the date (gauge data as of 2026-10-31)[6]

• 10 downstream towns with estimated travel times; 60 monthly dam reports[4]

Honest validation (our own backtests)

Test	Result	Verdict
Monthly dam drop signals vs Chiang Saen rises	precision 0.57, recall 0.36; chance 0.55	No skill above chance yet
Daily release-pulse travel to downstream towns (held-out 2018–2026)	54 held-out pulses; validated towns: 0 of 6	Experimental: no town beat persistence

Signals that have not beaten chance or persistence are labelled experimental on the site. Reservoir water area is not storage volume.

Sources

[1] Mekong River Commission, 'Mekong River Basin' — https://www.mrcmekong.org/mekong-river-basin/

[2] Mekong River Commission, 'People' — https://www.mrcmekong.org/people/

[3] Mekong River Commission, 'Fisheries Monitoring' — https://www.mrcmekong.org/fisheries-monitoring/

[4] River Monitor data files (MRC public gauge data; our own Sentinel-1 radar processing)

[5] Mekong River Commission public gauge data (PMFM), counted by River Monitor

[6] MRC gauge data; River Monitor percentiles vs 2006–2025

Contains modified Copernicus Sentinel data. River gauge data: Mekong River Commission (public pages). More: https://rivermonitor.ai/impact · https://rivermonitor.ai/data-sources