

Nationwide AI Mapping of 43,000+ Buildings Strengthens Disaster Resilience Planning in Saint Vincent and the Grenadines

AI in the Public Sector · Good practice · Saint Vincent and the Grenadines

Quality score: 87/100

Evidence strength: Observational / pre–post

Summary

World Bank researchers used fine-tuned deep learning (ConvNeXt) on satellite imagery to classify roof pitch and material for all 43,061 buildings in Saint Vincent and the Grenadines, F1 up to 0.88, giving planners nationwide data to target cyclone and flood risk.

Key dimensions

Dimension	Score
Evidence of impact / measured public value	2/3
Transparency, fairness & accountability	3/3
Transferability / demonstrated replication	3/3
Scalability beyond pilot	3/3
Governance, capability & sustainability	2/3

Evaluated by C-NAPSE

Data sources

C-NAPSE web research — accessed 2026-09-09

World Bank Group – Global Facility for Disaster Reduction and Recovery (GFDRR), Digital Earth Partnership, with the Government of Saint Vincent and the Grenadines — accessed 2026-09-09

GFDRR – Resilient Urban Development for Saint Vincent and the Grenadines — accessed 2026-09-09

arXiv preprint: AI-Derived Structural Building Intelligence for Urban Resilience — An Application in Saint Vincent and the Grenadines — accessed 2026-09-09

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