Action Plan

SAMOA CLIMATE RESILIENCE Technology Action Plan 2027–2028 From Climate Data to Early Action

29 October 2026

KOICA
Korea International Cooperation Agency

Prepared by

Fiti Tolai & Asi Fui
Samoa | Draft Proposal

Proposed Decision: Pilot a Community Climate Early-Action System

People Peace Prosperity Planet

How can Samoa turn existing climate information into faster, trusted and actionable warnings for villages?

Scope

Three communities; rainfall, river and water-storage monitoring.

Approach

Government-led, community-designed and compatible with national systems.

Timeline

2027–2028 (24 months) with an approval gate before procurement.

Budget

US$360,000 indicative; not funded or approved.

DECISION REQUESTED Endorse a 90-day inception assessment and authorize formal consultations with MNRE/DMO, Samoa Meteorology and pilot communities.

KOICA
Korea International Cooperation Agency

Draft for discussion—not a government-approved or funded programme.

People Peace Prosperity Planet

Contents

Six sections | Policy to measurable delivery

1. Background and Purpose
2. Current Status and Issues
3. Improvement Strategy
4. Specific Action Plan
5. Outline of the Action Plan
6. Expected Results

KOICA
Korea International Cooperation Agency

1. Background and Purpose

• Background

- Samoa's 2026–2036 early-warning roadmap calls for risk knowledge, monitoring, dissemination and response.
- Cyclones, flash floods, coastal inundation and drought disrupt services and livelihoods.
- PREPARE, SOFF and existing flood systems offer a foundation for targeted improvements.

• Purpose

- Create a government-approved, interoperable monitoring and community warning pilot.
- Test low-cost rainfall, river-level and water-storage telemetry in 3 selected communities.
- Demonstrate reliable Samoan-language communications and a sustainable operating model.

Sources: Samoa EW4All Roadmap (2026); World Bank PREPARE (Mar 2026); MNRE (2026).

2. Current Status and Issues

EXISTING FOUNDATION

- Samoa Meteorology runs CLEWS climate services.
- Vaisigano flood decision-support pilot demonstrated the value of combined forecasts and gauges.
- PREPARE/SOFF are investing in observation and alerts.
- 2026 risk-baseline assessment is under way.

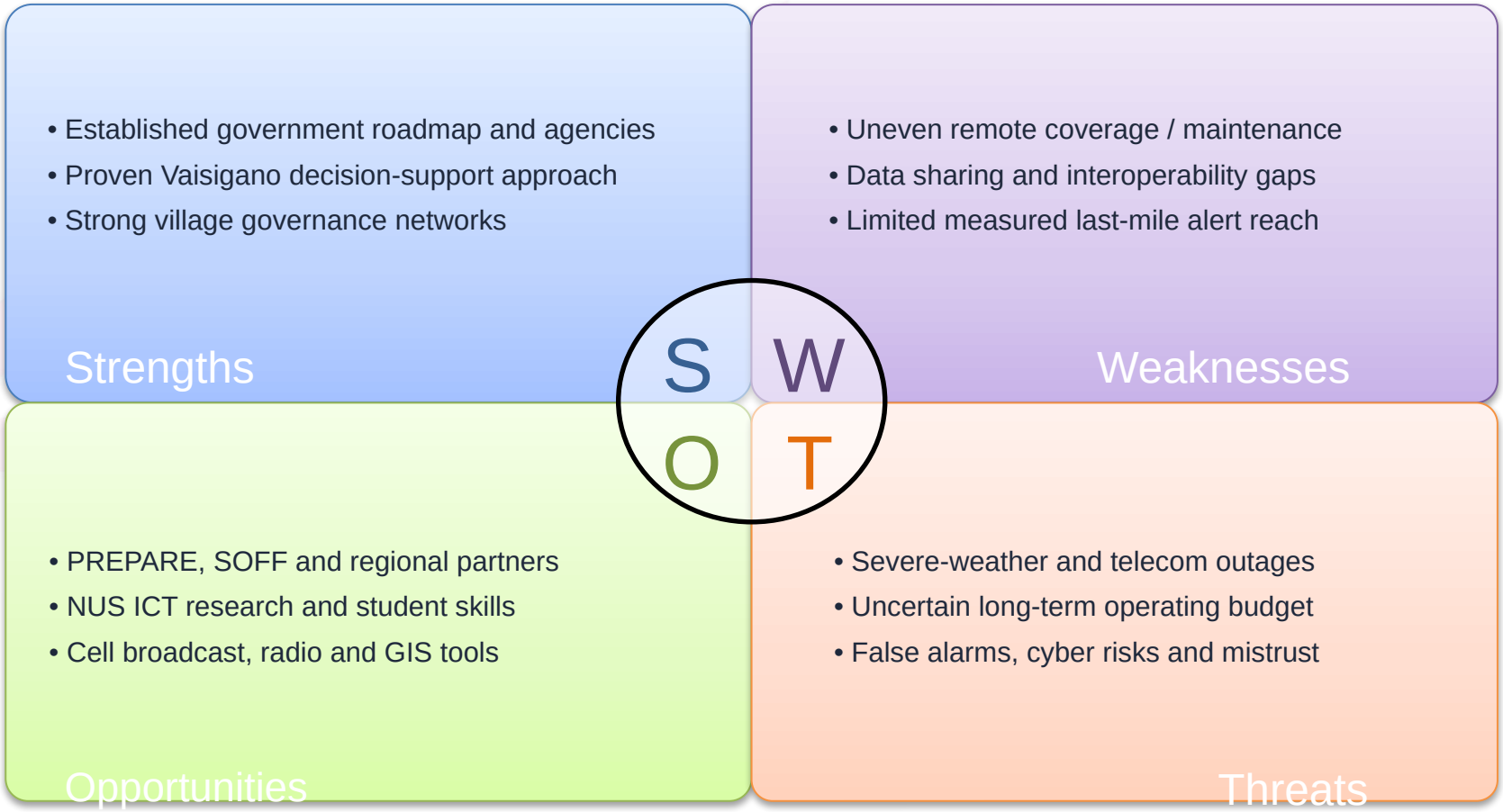
GAPS TO VERIFY & ADDRESS

- Separate datasets and uneven accessibility.
- Remote sensor uptime and servicing must be verified.
- Last-mile reach, accessibility and trust need field testing.
- Existing funding and ownership must be mapped before buying equipment.

Core issue: Samoa needs an end-to-end warning chain—not standalone devices. The project's baseline must confirm which locations, equipment and communication links need support.

Sources: MNRE DMO baseline workshop (14 Oct 2026); Samoa Meteorology; Williams et al. (2021); World Bank (2026).

2. Current Status and Issues – SWOT Analysis



KOICA
Korea International Cooperation Agency

SWOT is a proposed assessment; confirm with stakeholders during Jan–Mar 2027.

2. Current Status and Issues – Gap Analysis

Four practical gaps to close by December 2028

AS IS — VALIDATE IN BASELINE		TO BE — PILOT TARGET
Climate data in separate channels	→	Permissioned dashboard and API exchange
Patchy local rainfall / water monitoring	→	9 validated nodes in 3 sites
Unverified reach of public alerts	→	Bilingual, accessible multi-channel drills
Support depends on projects / vendors	→	Documented ownership, SOPs & service budget

Purpose: improve the complete warning-to-action pathway; complement—not duplicate—national investments.

3. Improvement Strategy

1 | Risk knowledge

Baseline hazard/exposure maps; community consultation; select pilot sites using documented risk and feasibility.

2 | Monitor and forecast

Review existing gauges first; add 9 telemetry nodes where needed; calibrate with MNRE technical specialists.

3 | Warning communication

Connect to authorized alerts via approved data feeds, SMS/radio/TV and backup channels; Samoan and English.

4 | Preparedness and action

Co-design village SOPs; run 2 drills/site/year; document response times, reach and improvements.

4. Specific Action Plan

Required arrangements before any operational public warning

Governance	MNRE/DMO: accountable lead; Samoa Meteorology / Water Resources: technical authority.
Data-sharing	Approved data inventory, memoranda, metadata, access controls and API standards.
Warning authority	Only designated government officials approve and issue public warnings; simulations labelled.
Accessibility	Samoan/English messages; village councils, women, older people and people with disabilities.
Operations	Named duty officers, maintenance service-level targets, backup power and incident response.

Gate 0: formal approval of lead agency, risk assessment, pilot locations and integration design.

4. Specific Action Plan

Three phases with go/no-go decisions

STEP 1 — JAN–JUN 2027 — **AUTHORIZE & DESIGN**

Baseline assets, site risk, community consent, governance/data agreements, technical design.

Gate: approved design and accountable owners

STEP 2 — JUL–DEC 2027 — **DEPLOY & TEST**

Procure/calibrate 9 nodes; GIS/data integration; backup alerts; pilot workshops and exercises.

Gate: functioning pilot and safe drill results

STEP 3 — JAN–DEC 2028 — **OPERATE & EVALUATE**

Monitor data quality and uptime; improve SOPs; run drills; assess cost, reach and scale options.

Gate: funded transition or evidence-based close

No public alerts are issued by the NUS prototype; operational authority stays with government.

5. Outline of the Action Plan

Proposed implementing structure — subject to written agency agreement

Accountable lead | MNRE / DMO

National oversight, official warning procedures, community preparedness.

Technical lead | Samoa Meteorology

Observation/forecast standards with Water Resources and technical agencies.

Research partner | NUS

Secure prototype, analytics, GIS, cyber controls, student capacity building.

Delivery partners | Multi-sector

MCIT, telecom operators, SWA, MAF, village councils, SPC/SPREP as agreed.

Project period: 01 January 2027 – 31 December 2028 | Inception review: 90 days | Quarterly steering meetings.

Partner roles are proposals and require confirmation; no endorsement is implied.

Action Plan – 2027 Implementation Schedule

Duration: 2 years | 2027 Work Plan

No	Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Fund US$
1	Inception approval & governance	■	■	■										8k
2	Risk baseline / pilot site selection		■	■	■	■								8k
3	Community / data agreements			■	■	■								—
4	Node procurement & installation					■	■	■	■	■				68k
5	Dashboard, GIS, secure integration					■	■	■	■	■	■			48k
6	Alert channels and backups							■	■	■	■	■		38k
7	SOPs, access/cyber validation							■	■	■	■			—
8	Workshops & simulation drills									■	■	■	■	25k
9	Pilot operation / QA										■	■	■	10k
10	Contingency provision													20k

KOICA
Korea International Cooperation Agency

Indicative 2027 planned allocation: US$225,000; amounts are proposed and subject to detailed procurement/approval.

Action Plan – 2028 Implementation Schedule

Duration: 2 years | 2028 Work Plan

No	Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Fund US$
1	Steering / governance	■			■			■			■			8k
2	Sensor servicing / upgrades	■	■		■	■		■	■		■	■		16k
3	Dashboard & cyber maintenance	■	■	■	■	■	■	■	■	■	■	■	■	22k
4	Communications / backup tests		■	■		■	■		■	■		■	■	18k
5	Community training & drills			■	■	■			■	■	■			35k
6	Data quality / independent review				■	■	■			■	■	■		20k
7	O&M & scale handover plan									■	■	■	■	—
8	Quarterly KPI evaluation			■			■			■			■	—
9	Scale decision & documentation										■	■	■	—
10	Contingency provision													16k

KOICA
Korea International Cooperation Agency

Indicative 2028 planned allocation: US$135,000; amounts are proposed and subject to detailed procurement/approval.

5. Outline of the Action Plan – Budget

People Peace Prosperity Planet

Indicative 2-year project budget | US$360,000 (not an approved allocation)

COST CATEGORY	2027	2028	TOTAL
Governance, baseline, agreements	$16k	$8k	$24k
9 nodes, installation, calibration	$68k	$16k	$84k
GIS platform, integration, cybersecurity	$48k	$22k	$70k
Community alert channels & backup	$38k	$18k	$56k
Training, inclusion and exercises	$25k	$35k	$60k
Operations, maintenance, evaluation	$10k	$20k	$30k
Contingency	$20k	$16k	$36k

TOTAL: 2027 $225k + 2028 $135k = $360k | Procurement validation and financing confirmation required.

Resources: 1 government project lead; part-time hydromet/ICT specialists; village focal points; contracted installers and trainers.

KOICA
Korea International Cooperation Agency

6. Expected Results – Outputs/Outcomes

• Economic Effects

✓
✓ • Earlier protective decisions and fewer avoidable service disruptions.
✓ • Track closures, response costs and assets protected; do not claim unverified savings.

• Technical Effects

✓
✓ • 9 functioning field nodes; ≥90% monthly data availability (pilot target).
✓ • 1 permissioned dashboard; timely telemetry and documented cyber/SOP tests.

• Social and Environmental Effects

✓
✓ • 3 village sites; at least 2 drills per site per year.
✓ • Aim for ≥80% exercise alert reach and ≥75% verified message comprehension.
✓ • Bilingual, inclusive instructions and documented community feedback.

Targets are proposed; set baselines in 2027. Measure results quarterly and independently evaluate in 2028.

6. Expected Results – Challenges/Solutions

• Challenges and Risks

- ✓
- ✓ • Duplicating existing national investments or unclear ownership.
- ✓ • Power/network outages and poor sensor maintenance.
- ✓ • Inaccurate thresholds, false warnings or cyber/data exposure.
- ✓ • Exclusion of remote communities and unfunded ongoing costs.

• Solutions

- ✓
- ✓ • First review PREPARE/SOFF/data-platform work and secure DMO sign-off.
- ✓ • Use solar/battery, resilient telemetry, spares and maintenance contracts.
- ✓ • Calibrate models; require human approval; encrypt, audit and test backups.
- ✓ • Village-led drills, accessible channels and a costed 2029 handover plan.
- ✓

Risk owner: proposed MNRE/DMO steering group; maintain a live risk register and quarterly review.

Evidence Base & Planning Assumptions

Verified evidence (accessed 29 October 2026)

1. Samoa MNRE | EW4All Roadmap 2026–2036

2. World Bank | PREPARE Samoa financing announcement, 20 Mar 2026

3. MNRE | National Disaster Preparedness Baseline Assessment, Oct 2026

4. Samoa Meteorology | Climate Early Warning Services

5. Samoa MPMC | El Niño outlook, 12 Aug 2026

6. Williams et al. | Vaisigano Flood Decision Support System, 2021

7. KGGTF | Climate Data Sharing Platform and AI Warning Grant

8. UNFCCC | Samoa National Adaptation Plan, July 2026

All budgets, deployment counts, 2027–2028 dates and KPI thresholds in this deck are illustrative planning assumptions, not reported government commitments.

Early Warning → Early Action

NEXT DECISION: Endorse inception, identify the government lead and agree on three potential pilot communities.

KOICA
Korea International Cooperation Agency