TEAM ARCHETYPE - PHILIPPINES

SILONG

Six and a quarter million displaced. **Location unknown.**

Silong is Filipino for the space beneath a house, where a family waits out the water. Two of every three recorded displacements end somewhere other than an evacuation centre — and the national record has no column saying where.



Angelo Julius Nuque · Kim Williame Lee
De La Salle University, Philippines

Twenty years of records end at a blank column.

ADINet — the ASEAN Disaster Information Network, 2004–2024

Two registers, never one series. ADINet is what states report to ASEAN; DROMIC is the national record. Neither can be added to the other.

7.5M

PEOPLE DISPLACED - ASEAN

in 3,600 recorded disaster events, 2004–2024

$3.1B

REPORTED DAMAGE - ASEAN

the same twenty years of regional records

1 in 12

DISPLACEMENTS PER HEAD

in the Philippine national record, 2023–2026.
A rate of events, not a share of people

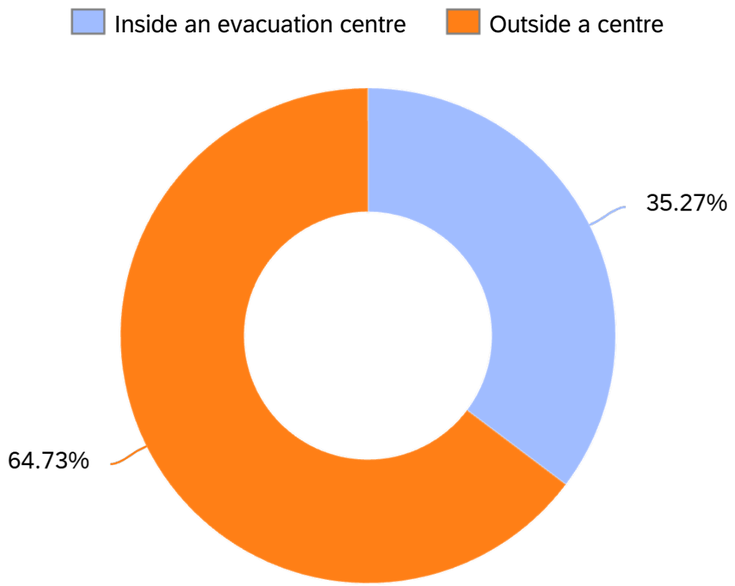
1 of 11 member-state agencies publishes a shelter split. The AHA Centre's 164-page monitoring report contains the words “host” and “relatives” **zero times**.

The region counts the disaster. It does not count where anyone slept.

Source: ADINet / AHA Centre, cited at the AADMER Work Programme 2026–2030 launch; AHA Centre ARMOR 2nd edition; DSWD-DROMIC 2023–2026

Two in three sheltered where the record cannot name.

Where displaced Filipinos went · 9,664,445 displacements, 2023–2026



6,255,982 sheltered somwhere other than a centre

3,408,463 reached an evacuation centre

> **temporarily stayed with their relatives or friends.**
>
> DSWD's own wording — and the whole of the record for 6.25 million people. No barangay, no duration, no outcome.

Deduplicated within each event, then summed across events — so this counts displacements, not unique people. Town-level median 42.8%

Counted once, on the day they left. Never Located again.

Source: DSWD-DROMIC situation reports, 2023–2026. The quoted phrase is DSWD's own wording.

In the worst disasters, no one is left to take you in.

Share sheltering outside a centre, against the share of homes the same disaster destroyed

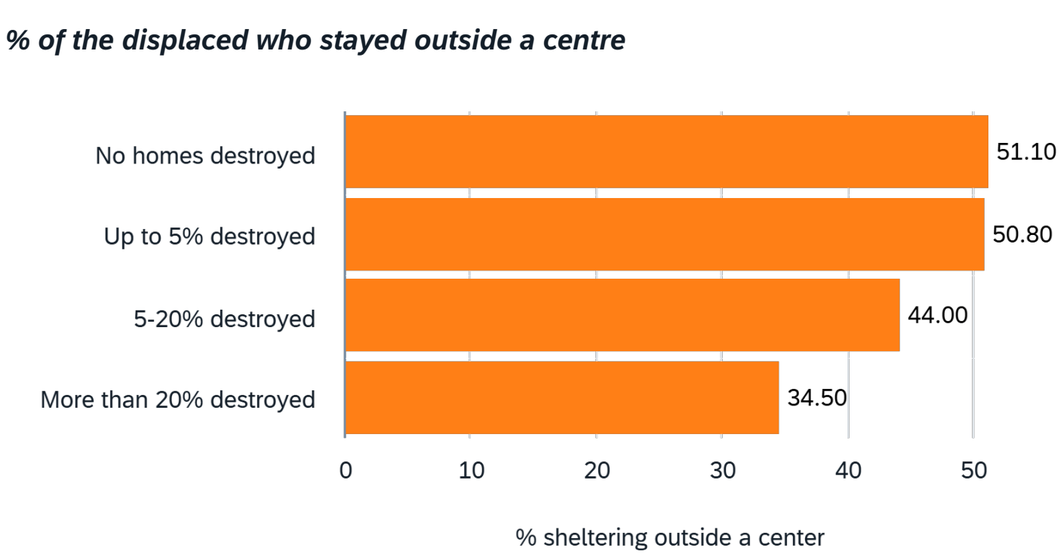




Photo: Philippine Coast Guard — Surigao City after Typhoon Rai, 2021. Public domain

A moderate flood. The next street is dry. A cousin can take you in.

One home in five destroyed. The cousin has lost hers too.

The informal system thins out exactly where it is needed most.

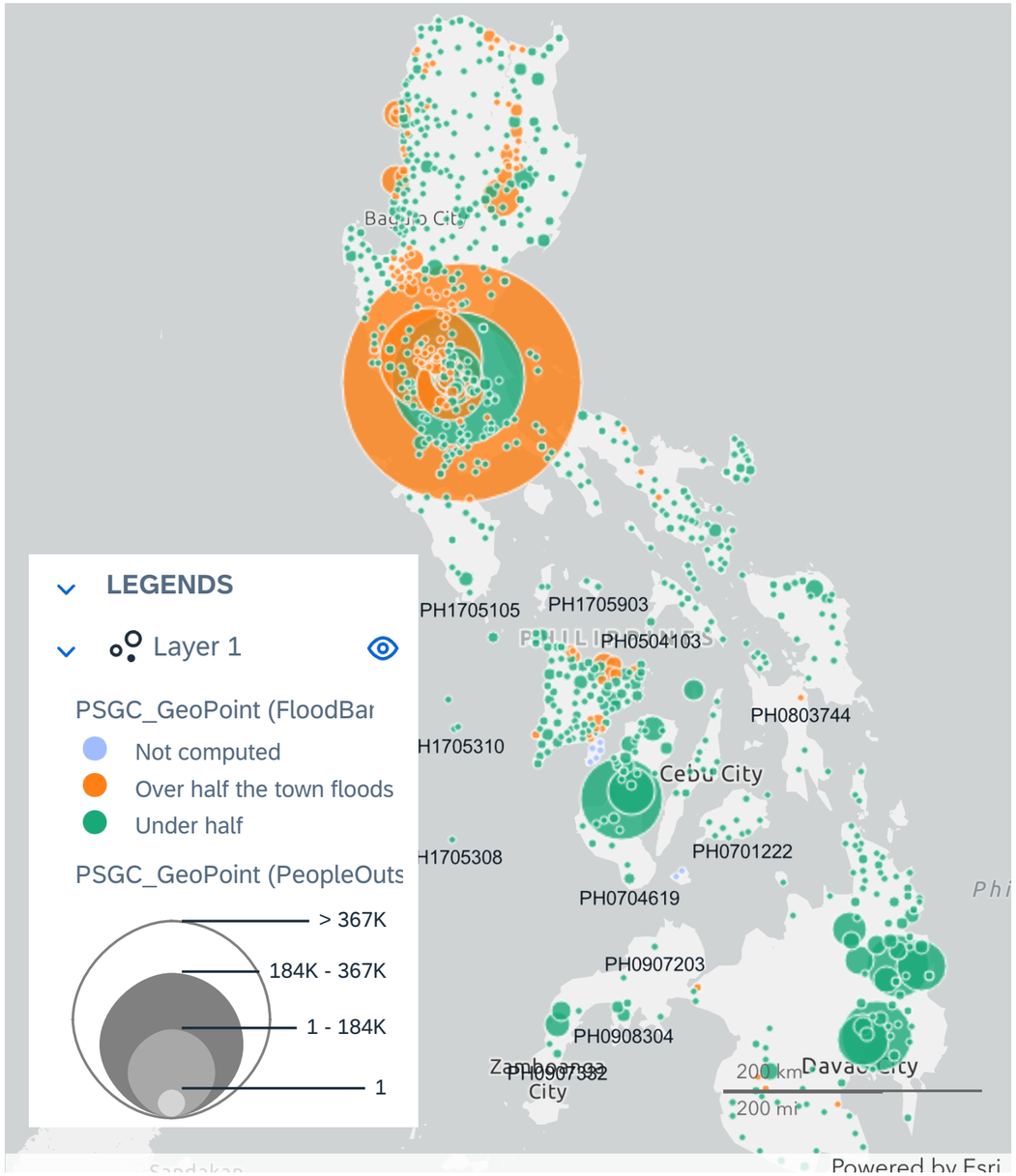
Bands 1 and 2 sit within a point of each other: the gradient is the trend across all four, not a step. We report the shape, not the reason — no dataset carries that.

Source: DSWD-DROMIC 2023–2026, matched by event and town — 3,507 town-level records

People

PSGC_GeoPoint (FloodBand, PeopleOutside)

Subtitle |



The blank space has geography.

Every municipality in the record, sized by the number of people who never reached a center

THE THREE LARGEST DISPLACEMENTS IN THE ARCHIVE

Marikina	370,000	two-thirds inside the 100-year flood zone
Himamaylan	151,885	Negros
Tagum	128,488	Davao del Norte

126 towns

flood over half their land in a 100-year event — drawn in orange. Nineteen rank among the fifty largest displacements.

12 of 12

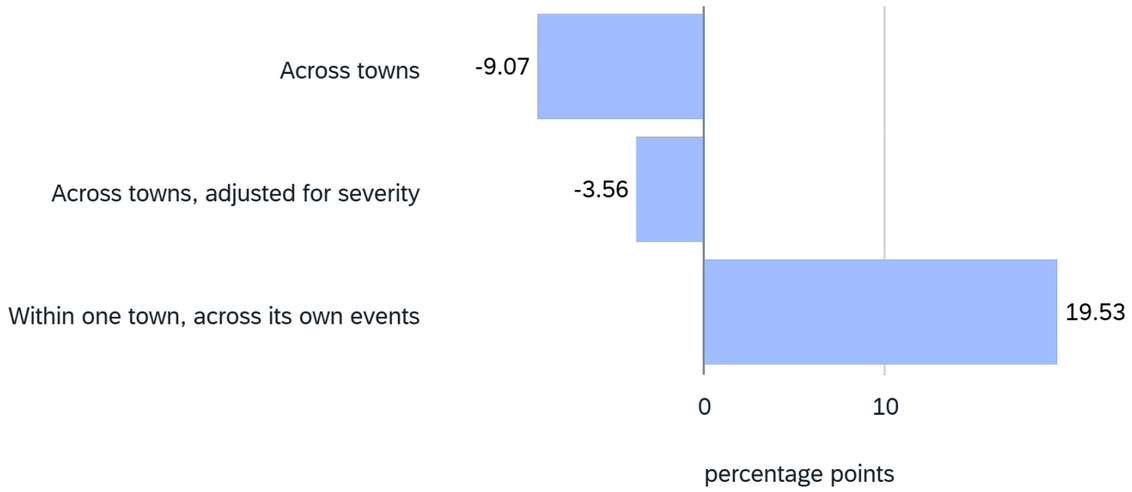
of the largest displacements had most people outside a centre — 67% to 99%. Carmen opened two centres and put 3,035 people in each

1,130 municipalities have someone outside. 846 resolve to a municipality record, holding 4.61 m of the 6.26 m — the frame every per-town share here is drawn on.

Source: DSWD-DROMIC 2023–2026; Project NOAH (DOST / PAGASA / UP-NIGS) 100-year flood, 1,437 municipalities; PSA-PSGC boundaries, joined on PSGC code

Ask the record three ways, and the sign flips.

Does opening more evacuation centres reduce the share of people sheltering outside one?



The problem is identification, not noise

Both are precise. Neither interval touches zero, and the two do not overlap — so they cannot both be the effect of centers.

Supply follows severity

A town opens centres because a bad storm is coming. Centres and severity arrive together, so the record cannot separate them.

95% intervals within-town [16.43, 22.62] across towns, adjusted [−5.49, −1.63]
the rank correlation has no standard error, and no error bar

No specification identifies an effect in either direction.

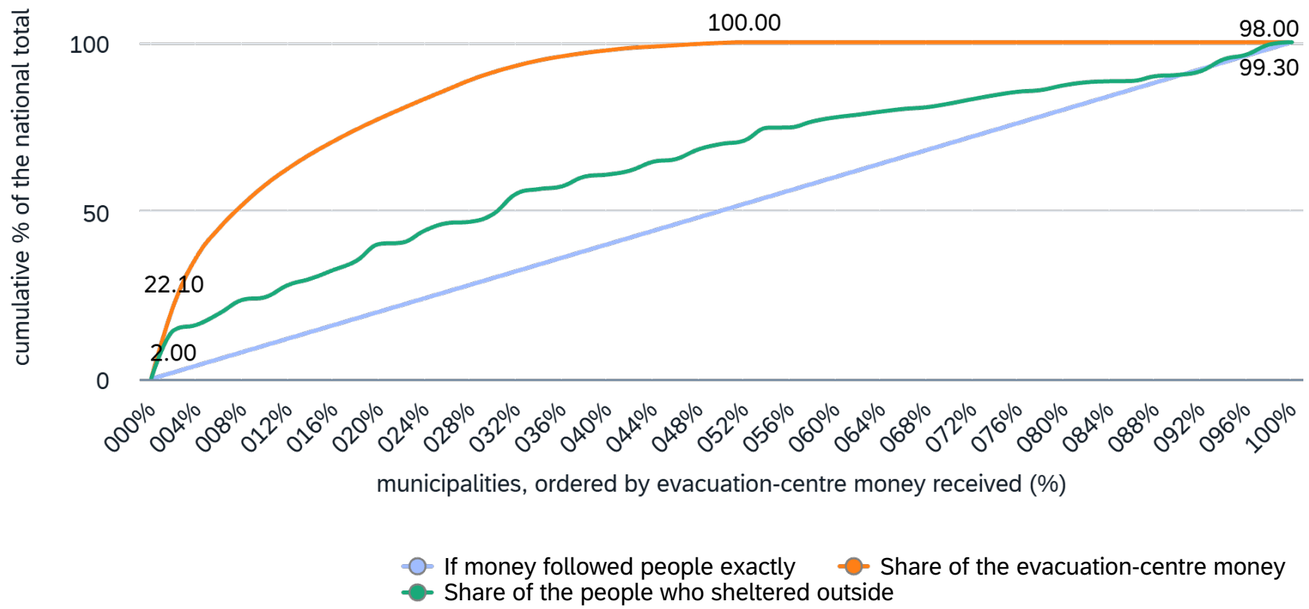
That is not a verdict on evacuation centres. It is a verdict on the record — and the argument for a better one.

Source: DSWD-DROMIC 2023–2026. Intervals are 1.96 × HC1 standard errors; n = 1,347 municipality-events, 469 municipalities.

The money goes into buildings. Two in three never reach one.

₱31.8 bn of evacuation centres already built since 2016 · ₱33.4 bn more to come under RA 12076, the Ligtas Pinoy Centers Act

cumulative % of the national total per municipalities, ordered by evacuation-centre money received (%), Series



HALF THE TOWNS TOOK ALL THE MONEY

57.6% of the money went to the best-funded tenth of municipalities, which hold **24.3%** of the people who sheltered outside.

405 of 846 towns with a recorded displacement received nothing at all. They hold **29.2%** of the 4.61 m people who sheltered outside in those towns.

The straight grey line is money tracking people exactly. Neither curve is near it.

Buildings are the right answer for the third of people who arrive.

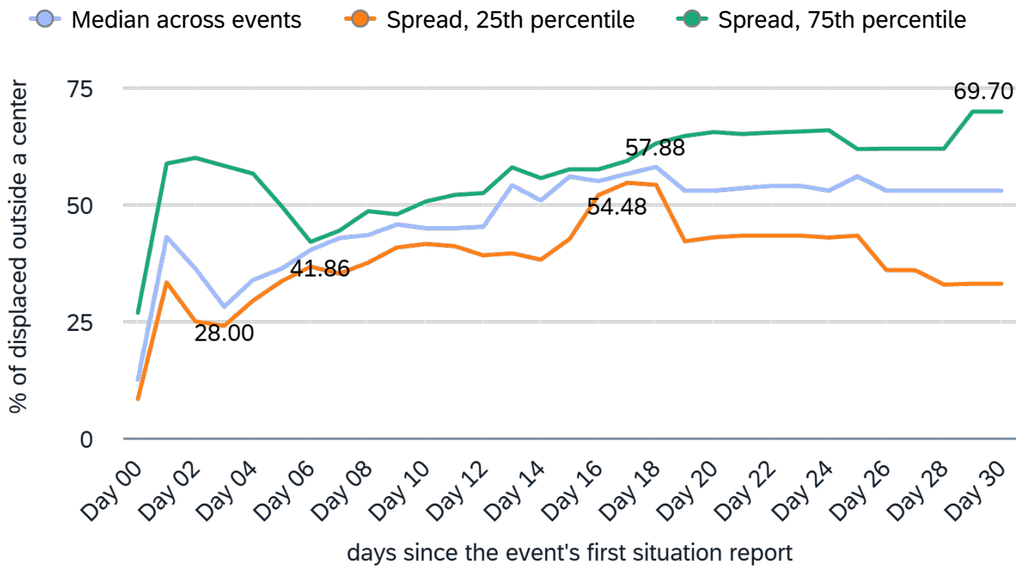
₱33.4 bn is six per cent of one year of public works. The constraint was never money — it is that the instrument reaches a third of the problem.

Source: RA 12076 (6 Dec 2024); CPBRD costing; 2026 GAA; DPWH transparency register — 2,209 contracts naming an evacuation facility, ₱31.8 bn nationally, of which ₱20.0 bn geocodes to the 846 towns this chart is drawn on. Shares are of those towns, not the 6.26 m.

A forecast, tested against events it had never seen.

Share sheltering outside a centre, by day of the event · seven events, 373 situation reports

% of displaced outside a center per days since the event's first situation report, Series



EACH EVENT FORECAST FROM THE SIX IT HAD NEVER SEEN



Forecastable, not explainable. Predicting where the caseload will be is not explaining why it moved. Page 6 rules the second out; this page claims only the first.

Six past events predict a new one twice as closely as its own opening reports.

On four of the seven, not all seven — and the 9.2 points still missed are the width a located record would take out..

Source: DSWD-DROMIC, 373 reports across 7 events, Jul 2025 – Aug 2026. Scored leave-one-event-out: each event seen only to day 3, graded on days 7–14. Smoothing is SAC Smart Predict's damped-trend method; given a full week of an event's own reports it reaches 13.7 pp against the pooled arc's 11.6.

Four decisions turn on one column the form does not have.

What 29,084 displacement records carry today, and the question that would change them

“Where are you right now?” at home · with a host · in a centre · we need rescue

WHAT THE NATIONAL FORM HOLDS TODAY

100% how many people, and which municipality

0% barangay, shelter location, duration

4.8% any age, sex or disability breakdown

DROMIC publishes a town-level inside/outside split — never a located record.

No age, no sex — so no protection planning for children, older people or persons with disabilities.

WHAT SILONG ASKS, AND WHAT IT FEEDS

Roster, ages, vulnerabilities
once · who is missing

Where would you go?
once · compliance model

Where are you right now?
each alert · THE MISSING FIELD

Roster, Are you safe? Water level?
each alert · rescue demand

Still displaced?
daily → weekly · duration

Names and the roster stay on the device. What leaves is aggregate.

PRIOR ART **eBayanihan & Agos, PH 2015**– — households already file structured disaster reports. Those asked about hazards, never shelter

Source: DSWD-DROMIC 2023–2026: 29,084 rows across 271 situation reports. A demographic annex appears in 13 of them.

What a barangay captain does with the answer.

Four decisions that become possible once shelter location is on the form

“Where are you right now?”

Pre-landfall list

PREVENTION

The households that stayed put before, and sit in the hazard zone now.

A list held before landfall — not a rescue call after it.

Rescue demand

RESPONSE

Live “not safe” answers, rainfall, water level.

Boats move before the calls come, located and deduplicated.

Absorbing areas

RELIEF

“I am at my sister's in Barangay X.”

Water, sanitation and health follow people to the places taking them in.

Duration

RECOVERY

The question repeats.

Past 90 days, a stay becomes a housing obligation, not an emergency.

PRIOR ART **UNHCR Emergency Handbook** — a counted shelter category with its own registration — about 30% of the displaced were hosted in Haiti 2010, 90% in Pakistan 2009. The Philippine form has no such category

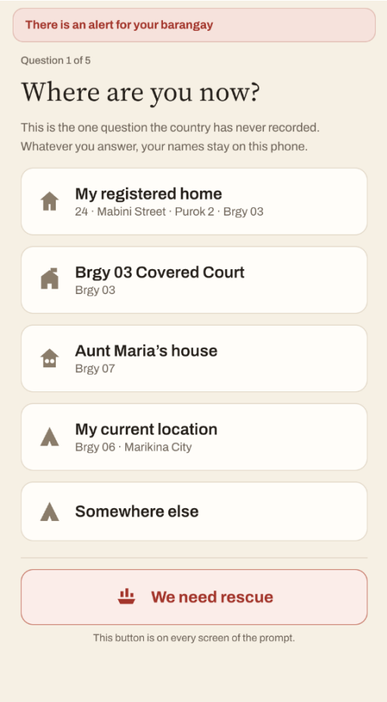
Nobody is paid to take anyone in. You support the place: the water, the toilets, the health visit.

Source: Model design; UNHCR Emergency Handbook, Hosting Arrangements.

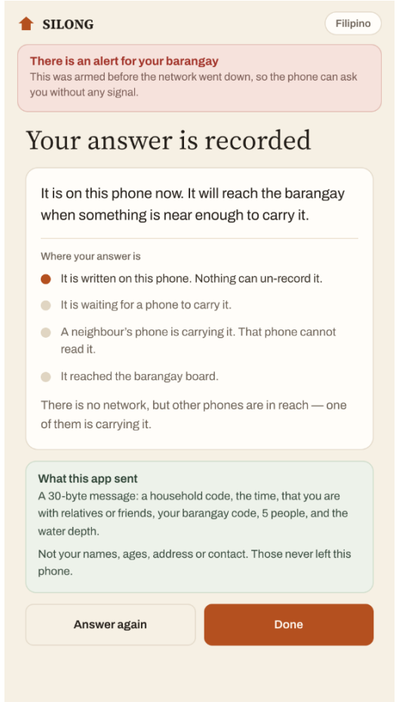
One tap, and the answer walks out without a network.

Screens from the running prototype: the question, where the answer waits, and what the barangay sees

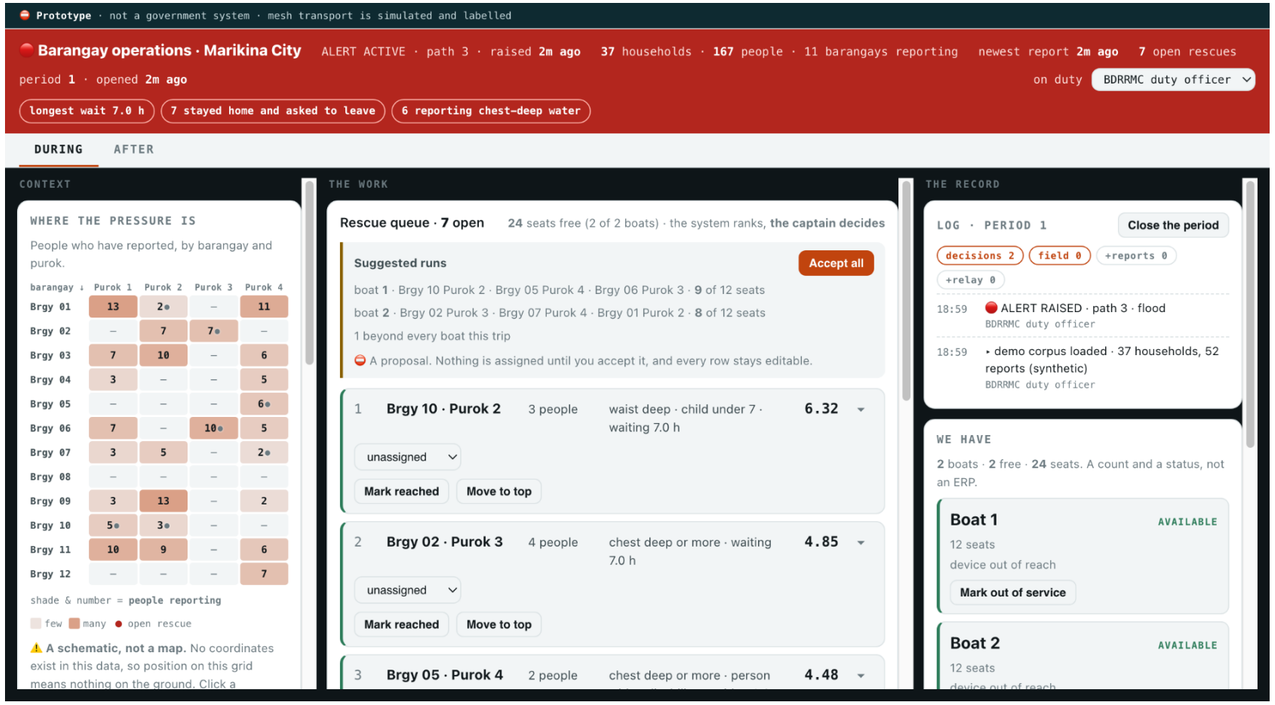
THE QUESTION - ONE TAP



WHERE IT WAITS



WHAT THE BARANGAY FEELS



PRIOR ART **Türkiye, February 2023** — volunteers built OCR pipelines mid-disaster to turn social-media pleas into usable records. SILONG puts the channel in before the disaster, not during it.

One household reports once. Today the same family is posted five times on Facebook, and counted as five.

Source: Screen captures from the team's SILONG prototype, 10 September 2026. Households and durations shown are synthetic and labelled so in the build; Marikina's figures are real.

Built on forms, warnings and people that already exist.

Three phases, who owns each one, and how far each one reaches

PHASE 1 0–6 months	**One province**	One typhoon season, hazard barangays registered. GATE — the response rate is published against a ground-truth sweep, and must clear it before Phase 2.	OCD · DSWD · a university evaluates.
PHASE 2 6–18 months	**National**	Three columns added to the DROMIC form.	NDRRMC · DSWD · DILG
PHASE 3 Year 2+	**Regional**	Shelter location becomes an ADINet field.	AHA Centre · ACDM

HOW FAR THE PHASES REACH 39 towns hold half of the 6,255,982; 162 hold 80%. One province is not a token.

CARRYING THE ANSWER OUT · store and forward.

PRIOR ART Meshtastic — LoRa mesh already moves messages device to device at city scale, on hardware costing a few thousand pesos.

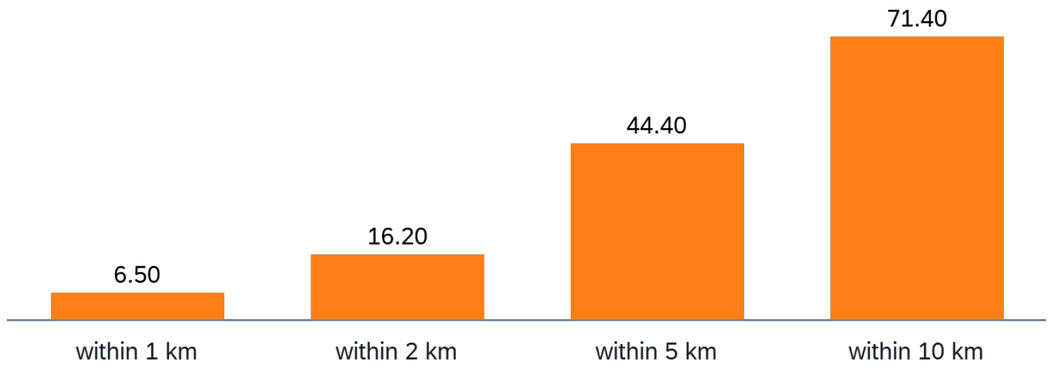
Phone → **Bluetooth to nearby phones** → **Solar LoRa relay at the barangay hall** → **Barangay, then the city**

Source: DSWD-DROMIC forms; PAGASA and Project NOAH advisories; RA 10121 and the 5% Local DRRM Fund. LoRa is licence-free in AS923. Concentration over 1,130 municipalities, Gini 0.830.

Reaching them by building is a different order of magnitude.

What a 1 km access guarantee would require, against what the law funds

PctBarangays per Radius



Median barangay is 5.75 km from a purpose-built centre. Towns also open a median of seven schools and halls — thin provision, not nowhere to go.

32,491 centres would put every barangay within 1 km — the radius Bangladesh designs to.

515 is what RA 12076 funds, at ₱64.8 M each.

6.5% of barangays are within 1 km of one today.

₱19–39 M puts a solar relay in all 6,484 barangays of the worst-flooding towns — less than one building.

Not an argument that centres fail. Building scales to the third who arrive. A relay shelters nobody — it carries the answer. The column costs a form revision and health-worker time RA 10121 already funds.

WHAT COULD GO WRONG, AND WHAT ABSORBS IT

- **Only the connected answer** a PSA-method enumeration sweep re-weights to everyone
- **No power, no towers, a dead relay** the barangay DRRM committee owns the node, funded by the 5% Local DRRM Fund
- **A household's data is exposed** the roster stays on the device; four states and a code leave

Source: Greedy set cover over 42,048 PSA/OCHA barangay centroids; DPWH register; CPBRD costing of RA 12076. Bangladesh radius: Multi-Purpose Cyclone Shelter Programme. Relay cost indicative, nothing quoted — ₱3–6k per node, backhaul not included.

A regional commitment, waiting on a number.

AADMER Work Programme 2026–2030 · the Philippines chairs ASEAN in 2026

ADINet records the event.

3,600 events, 7.5 million displaced. Where they sheltered is recorded by no member state.

“Navigating Our Future, Together”

The 2026 Chairship theme, whose People Empowerment pillar names “protecting vulnerable groups”. Adding a field to a regional form is something a chair can do.

PP1

Risk Assessment, Monitoring & Early Warning

Where the displaced went — a number no member state holds

PP2

Prevention & Mitigation

Households that stay put, identified before the storm.

PP3

Preparedness & Response

Rescue demand forecast; relief follows people out.

PP4

Resilient Recovery

Duration measured — a long stay becomes a housing obligation.

PP5

Global Leadership

One shared field on AADMER’s common platform (One ASEAN, One Response, 2016).

SDG 11.5 · 11.b · 13.1, ind. 13.1.3 | Sendai B-3 / B-4 | ASCC Strategic Plan 2026–2030, 11.2.5 | AADMER PGI principle

One column, on a form eleven countries already fill in.

Source: DSWD-DROMIC situation reports, 2023–2026. The quoted phrase is DSWD's own wording.

Two in three are somewhere.
Nobody has ever asked where.

THE FINDINGS

6,255,982 displacement records with no location — and in the worst disasters, the households that would have hosted

THE GAP

Barangay, shelter location and duration appear in none of 29,084 records. ₱31.8 bn of evacuation centres was built without

THE PROPOSAL

Ask the household at the moment only it can answer, and carry the answer out over the phones already in the barangay.

WHAT IT BUYS

162 municipalities hold 5,006,692 of the 6.26 m — 80% — so phases 1 and 2 reach four in five. And a pooled record

"Where are you right now?" the cheapest question in Philippine disaster management



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Images. Cover and closing photographs: two frames of a flooded street in Malabon, Metro Manila, via Pexels under the Pexels licence, pexels.com. Page 4: Philippine Coast Guard, Surigao City after Typhoon Rai, December 2021 — a work of the Government of the Philippines, in which no copyright subsists under IP Code (RA 8293) §176; via Wikimedia Commons. Page 11: screen captures of the team's own prototype. All charts on this storyboard are generated in SAP Analytics Cloud.

All online sources accessed September 2026. Analysis code, figure ledgers and the checkers that assert every number on this storyboard are held in the team's repository