

CLIMATE AND DISASTER RISK ASSESSMENT



PROVINCE OF CAVITE
MUNICIPALITY OF MENDEZ

Climate and Disaster Risk Assessment of Mendez

Annex to the Comprehensive Land Use Plan

Generated 8 September 2026

SAMPLE DATA - NOT FOR SUBMISSION

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This document contains seeded sample data (adaptive_capacity, cbms, costs, facilities, land_use). It is for testing o

1. Introduction

This Climate and Disaster Risk Assessment covers the 24 barangays of the Municipality of Mendez, Province of Cavite (PSGC 0402114000). It is prepared as an annex to the Comprehensive Land Use Plan in accordance with the Department of Human Settlements and Urban Development Supplemental Guidelines (DHSUD-2025.1), and follows the eight-table scoring sequence those guidelines set out.

Every figure in this document is traceable to a named source and a dated request. The source register in the final section lists each dataset, the agency that publishes it, the service endpoint it was retrieved from, and what it was used for. Nothing here is entered by hand except the datasets the local government supplied, and those are identified as such.

1.1 Status of this assessment

Table A. Completeness of this assessment at the time of generation

Measure	Value
Hazards applicable to this municipality	7
Hazards with computed exposure	3
Datasets still outstanding	8
Stage reached	Partial exposure
Risk assessment	Scored
Ready for submission	No

This is a working draft. It is not submittable until the LGU datasets are loaded, risk is scored, and the MPDO has signed off.

2. The Municipality

Table B. Profile of the municipality

Attribute	Value
Municipality	Mendez
Classification	Municipality
Province	Cavite
Region	Region IV-A (CALABARZON)
PSGC code	0402114000
Barangays	24
Has a coastline	No
Land area, GIS extent	1,473.9 ha

Attribute	Value
Boundary source	faeldon/philippines-json-maps PSGC 2023-12-31 (PSA/NAMRIA via faeldon, MIT)

2.1 Barangays

Table C. Barangays, land area and population

Barangay	Class	Area (ha)	Population	Households
Anuling Cerca I	Urban	51.3	2,571	559
Anuling Cerca II	Urban	141.2	11,439	2,487
Anuling Lejos I	Urban	93.7	10,484	2,279
Anuling Lejos II	Urban	79.3	5,363	1,166
Asis I	Rural	43.9	4,329	941
Asis II	Rural	3.9	300	65
Asis III	Rural	185.3	15,788	3,432
Banayad	Rural	94.4	10,963	2,383
Bukal	Rural	101.7	7,307	1,588
Galicia I	Rural	14.0	1,441	313
Galicia II	Rural	16.6	972	211
Galicia III	Rural	57.3	5,120	1,113
Miguel Mojica	Rural	118.0	14,192	3,085
Palocpoc I	Rural	140.8	10,703	2,327
Palocpoc II	Rural	64.8	6,925	1,505
Panungyan I	Rural	66.6	4,171	907
Panungyan II	Rural	167.4	15,658	3,404
Poblacion I	Rural	5.6	692	150
Poblacion II	Rural	5.1	409	89
Poblacion III	Rural	3.8	420	91
Poblacion IV	Rural	3.2	300	65
Poblacion V	Rural	3.2	310	67
Poblacion VI	Rural	6.7	357	78
Poblacion VII	Rural	4.9	417	91

Source: Barangay outlines and areas from the national administrative boundary dataset; population and households as supplied by the local government.

Total population across the barangays with figures supplied is 130,631 in 28,396 households.

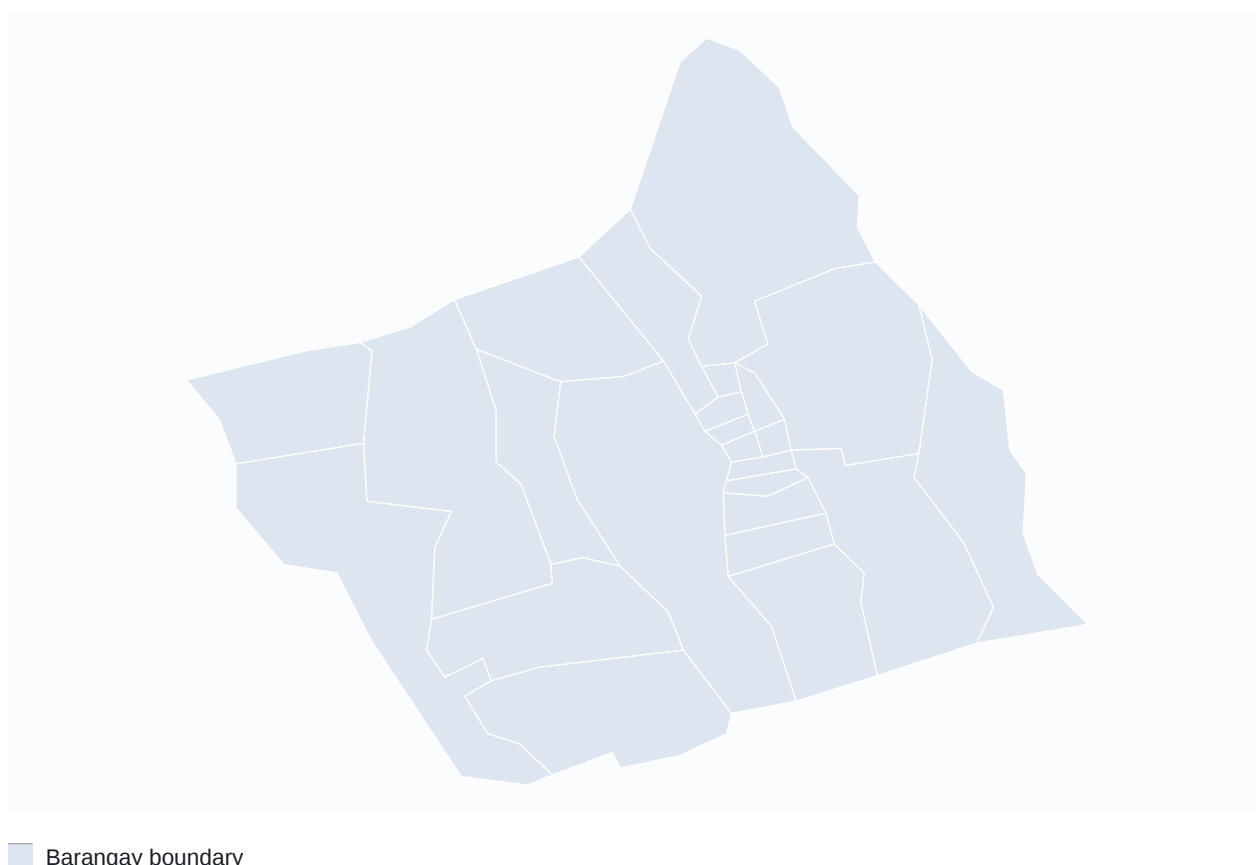


Figure 1. Barangay boundaries of the municipality.

3. Methodology

The assessment follows the DHSUD scoring sequence. Each barangay is scored for exposure to each hazard, for sensitivity and adaptive capacity, and those combine into a vulnerability score. Exposure and vulnerability give the severity of consequence, and severity multiplied by the likelihood of the hazard gives the risk score, which falls into one of four land-use control categories. The tables reproduced below are the published DHSUD thresholds, not this system's own.

severity of consequence = (exposure + vulnerability) / 2. risk score = likelihood x severity of consequence. Adaptive capacity is inverted: A is the strongest and scores 1. The severity table published by DHSUD is reproduced exactly by the formula above at all sixteen cells, which the test suite asserts cell by cell.

3.1 Likelihood of occurrence

Table 1. Indicative likelihood of occurrence (temporal probability) scores

Score	Rating	Return period	Probability in 50 years	Description
4	Likely	1-25 years	87%-100%	This event has occurred several times in your lifetime; it is expected to occur again within a short span.
3	Possible	25-100 years	40%-86%	The event may have occurred once or twice in your lifetime; it is possible to occur within a generation.
2	Unlikely	10-30 years	22.1%-39%	The event is unlikely to be experienced within a lifetime, but records show it has occurred before.

Score	Rating	Return period	Probability in 50 years	Description
1	Rare	30-100 years	2%-22%	The event is possible but not expected to occur except under exceptional circumstances.

Source: DHSUD

3.2 Exposure

Table 2. Exposure scores by share of the unit affected

Score	Rating	Area or population affected	Nominal
4	Very high	>15% affected	Yes
3	High	11-15% affected	-
2	Moderate	6-10% affected	-
1	Low	0-5% affected	No

Source: DHSUD

Table 3. Exposure thresholds by exposure unit

Exposure unit	Parameter	Score	Threshold
Population	Affected population	4	>20%
Population	Affected population	3	10.01-20%
Population	Affected population	2	5.01-10%
Population	Affected population	1	<=5%
Critical Point Facilities	Affected facility	4	100% (yes)
Critical Point Facilities	Affected facility	1	0% (no)
Lifeline Utilities	Affected area	4	>40%
Lifeline Utilities	Affected area	3	20.01-40%
Lifeline Utilities	Affected area	2	10.01-20%
Lifeline Utilities	Affected area	1	<=10%
Urban Use Areas	Affected area	4	>40%
Urban Use Areas	Affected area	3	20.01-40%
Urban Use Areas	Affected area	2	10.01-20%
Urban Use Areas	Affected area	1	<=10%
Natural Resource-based Production	Affected area	4	>40%
Natural Resource-based Production	Affected area	3	20.01-40%
Natural Resource-based Production	Affected area	2	10.01-20%
Natural Resource-based Production	Affected area	1	<=10%

Source: DHSUD

3.3 Sensitivity and adaptive capacity

Table 4. Sensitivity scores

Score	Rating	Share of the unit that is sensitive
4	Very high	>15% sensitive
3	High	11-15% sensitive
2	Moderate	6-10% sensitive
1	Low	0-5% sensitive

Source: DHSUD

Table 5. Adaptive capacity scores

Code	Score	Rating	Descriptive criterion
A	1	Very high	Local government is implementing existing regulations on hazard mitigation and structural design and monitors compliance thereof
B	2	High	Local government is implementing existing regulations on hazard mitigation and structural design
C	3	Moderate	Local government has existing regulations on hazard mitigation and structural design
D	4	Low	Local government has no regulations on hazard mitigation and structural design

Source: DHSUD. Note the inversion: code A is the strongest capacity and scores 1, because the score feeds a vulnerability index in which a higher number is worse.

3.4 Vulnerability, severity and risk

Table 6. Vulnerability index converted to a vulnerability score

Index	Score	Rating
up to 0.50	0.25	Very low vulnerability
up to 1.00	0.50	Low vulnerability
up to 2.00	0.75	Moderate vulnerability
up to 4.00	1.00	High vulnerability

Source: DHSUD

Table 7. Severity of consequence, by exposure and vulnerability score

	Vulnerability 4	Vulnerability 3	Vulnerability 2	Vulnerability 1
Exposure 4	4.00	3.50	3.00	2.50
Exposure 3	3.50	3.00	2.50	2.00
Exposure 2	3.00	2.50	2.00	1.50
Exposure 1	2.50	2.00	1.50	1.00

Source: DHSUD

Table 8. Risk categories and the corresponding land-use control

Risk score	Category	Land-use control
12.00 - 16.00	Very High-Risk Areas	Prohibited
7.00 - 11.99	High Risk Areas	Discretionary
3.00 - 6.99	Moderate Risk Areas	Conditional
1.00 - 2.99	Low Risk Areas	Permitted

Source: DHSUD

4. Hazards

Every hazard applicable to this municipality appears below, whether or not its exposure could be computed. A hazard omitted because its data could not be retrieved would be indistinguishable from a hazard that does not occur here, and those are opposite conclusions.

Table D. Hazards assessed, their sources and their status

Hazard	Group	Publishing agency	Status	Coverage
Flood	hydrometeorological	DENR-MGB	Computed	19 of 24 barangays
Rain-induced Landslide	hydrometeorological	DENR-MGB	Computed	24 of 24 barangays
Drought	hydrometeorological	DAAGASA	Pending	-
Ground Shaking	geological	PHIVOLCS	Computed	24 of 24 barangays
Liquefaction	geological	PHIVOLCS	Nil	-
Earthquake-induced Landslide	geological	PHIVOLCS	Pending	-
Ground Rupture	geological	PHIVOLCS	Pending	-

4.1 Flood

Susceptibility polygons published by DENR-MGB were clipped to each barangay and the share of the barangay in each susceptibility class measured. 19 of the 24 barangays carry at least one susceptibility class. The measurement used 1 features retrieved on 2026-09-08 from the FloodSusc field.

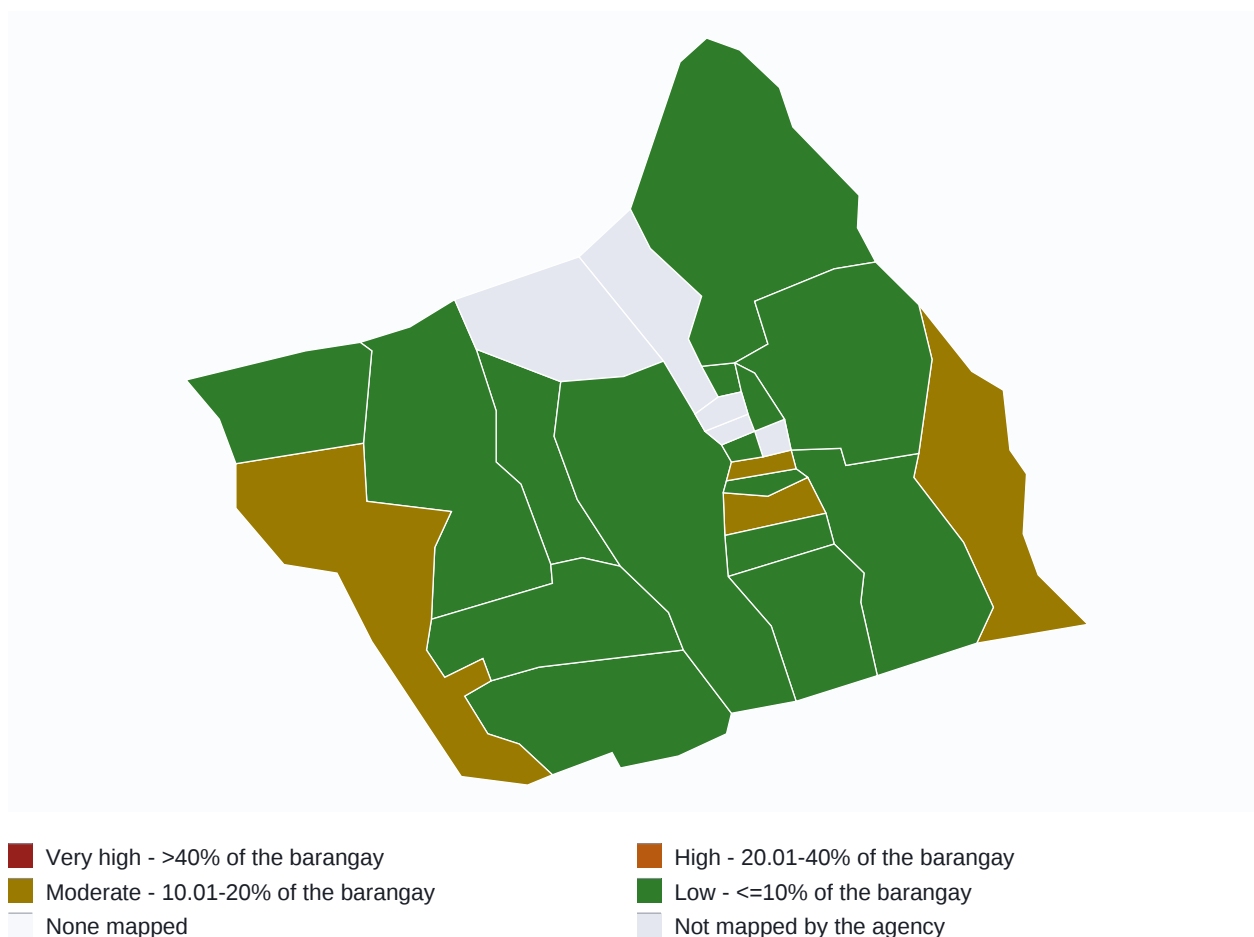


Figure 2. Flood susceptibility by barangay, banded to the DHSUD exposure scores.

Table 4.1. Flood: susceptible share by barangay

Barangay	Area (ha)	Susceptible share	Worst class	Exposure score
Anuling Cerca I	51.3	6.2%	HF	1
Anuling Cerca II	141.2	6.0%	HF	1
Anuling Lejos I	93.7	9.3%	HF	1
Anuling Lejos II	79.3	5.9%	HF	1
Asis II	3.9	0.6%	HF	1
Asis III	185.3	0.8%	HF	1
Banayad	94.4	11.1%	HF	2
Bukal	101.7	2.9%	HF	1
Galicia I	14.0	11.6%	HF	2
Galicia II	16.6	9.7%	HF	1
Galicia III	57.3	3.0%	HF	1
Miguel Mojica	118.0	3.6%	HF	1
Palocpoc I	140.8	13.7%	HF	2
Palocpoc II	64.8	5.7%	HF	1

Barangay	Area (ha)	Susceptible share	Worst class	Exposure score
Panungyan II	167.4	9.9%	HF	1
Poblacion I	5.6	9.3%	HF	1
Poblacion II	5.1	10.5%	HF	2
Poblacion IV	3.2	5.3%	HF	1
Poblacion VI	6.7	2.7%	HF	1

Source: DENR-Mines and Geosciences Bureau

4.2 Rain-induced Landslide

Susceptibility polygons published by DENR-MGB were clipped to each barangay and the share of the barangay in each susceptibility class measured. 24 of the 24 barangays carry at least one susceptibility class. The measurement used 3 features retrieved on 2026-09-08 from the LndslideSusc field.

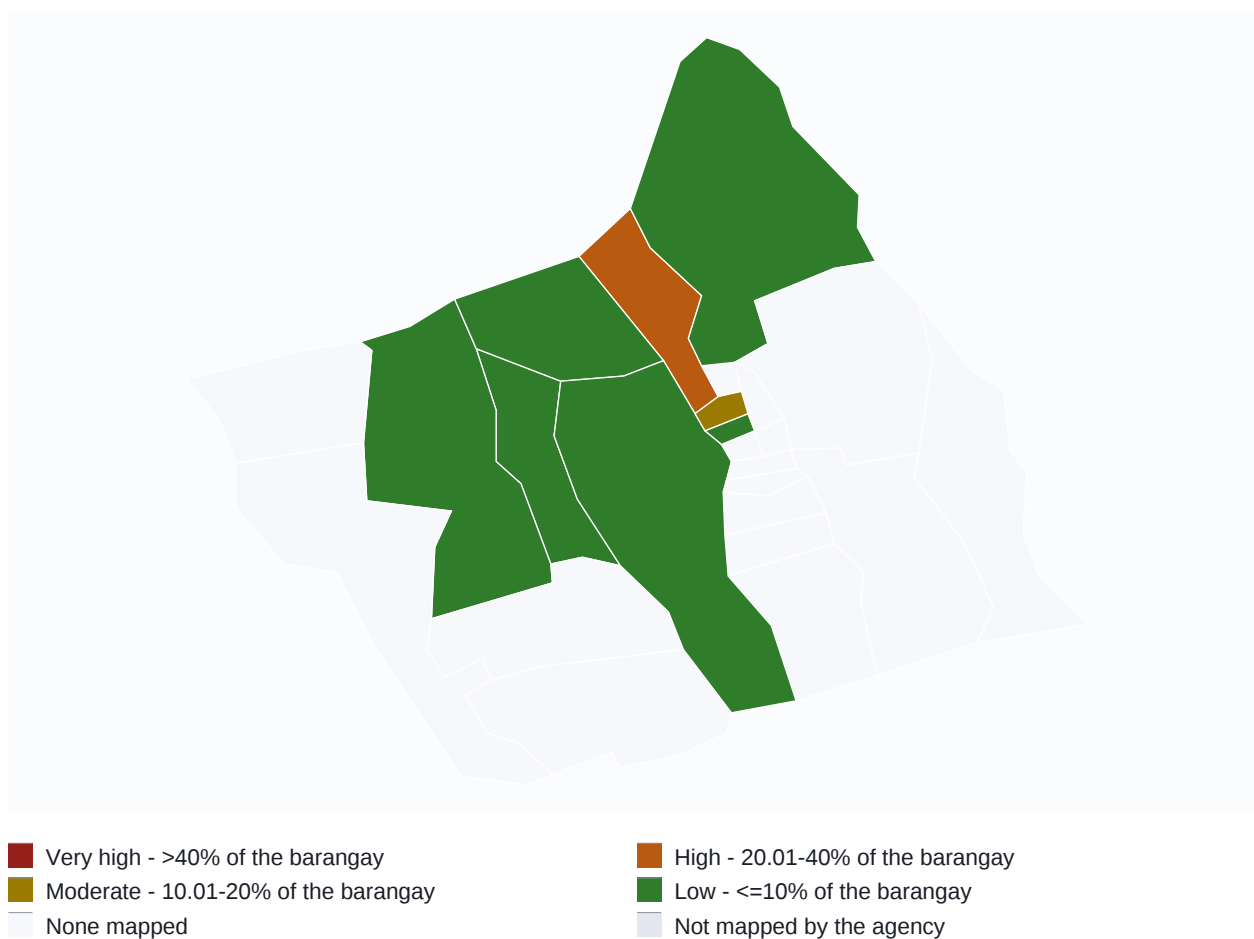


Figure 3. Rain-induced Landslide susceptibility by barangay, banded to the DHSUD exposure scores.

Table 4.2. Rain-induced Landslide: susceptible share by barangay

Barangay	Area (ha)	Susceptible share	Worst class	Exposure score
Anuling Cerca I	51.3	8.6%	HL	1
Anuling Cerca II	141.2	3.0%	HL	1

Barangay	Area (ha)	Susceptible share	Worst class	Exposure score
Anuling Lejos I	93.7	0.0%	LL	1
Anuling Lejos II	79.3	0.0%	LL	1
Asis I	43.9	21.1%	HL	3
Asis II	3.9	0.0%	LL	1
Asis III	185.3	6.1%	HL	1
Banayad	94.4	0.0%	LL	1
Bukal	101.7	0.0%	LL	1
Galicia I	14.0	0.0%	LL	1
Galicia II	16.6	0.0%	LL	1
Galicia III	57.3	0.0%	LL	1
Miguel Mojica	118.0	0.0%	LL	1
Palocpoc I	140.8	0.0%	LL	1
Palocpoc II	64.8	0.0%	LL	1
Panungyan I	66.6	3.1%	HL	1
Panungyan II	167.4	0.9%	HL	1
Poblacion I	5.6	0.0%	LL	1
Poblacion II	5.1	0.0%	LL	1
Poblacion III	3.8	0.0%	LL	1
Poblacion IV	3.2	0.0%	LL	1
Poblacion V	3.2	7.6%	HL	1
Poblacion VI	6.7	0.0%	LL	1
Poblacion VII	4.9	12.0%	HL	2

Source: DENR-Mines and Geosciences Bureau

4.3 Drought

No automated source is wired up for this hazard yet.

4.4 Ground Shaking

Susceptibility polygons published by PHIVOLCS were clipped to each barangay and the share of the barangay in each susceptibility class measured. 24 of the 24 barangays carry at least one susceptibility class. The measurement used 0 features retrieved on 2026-09-08 from the peiscode field.

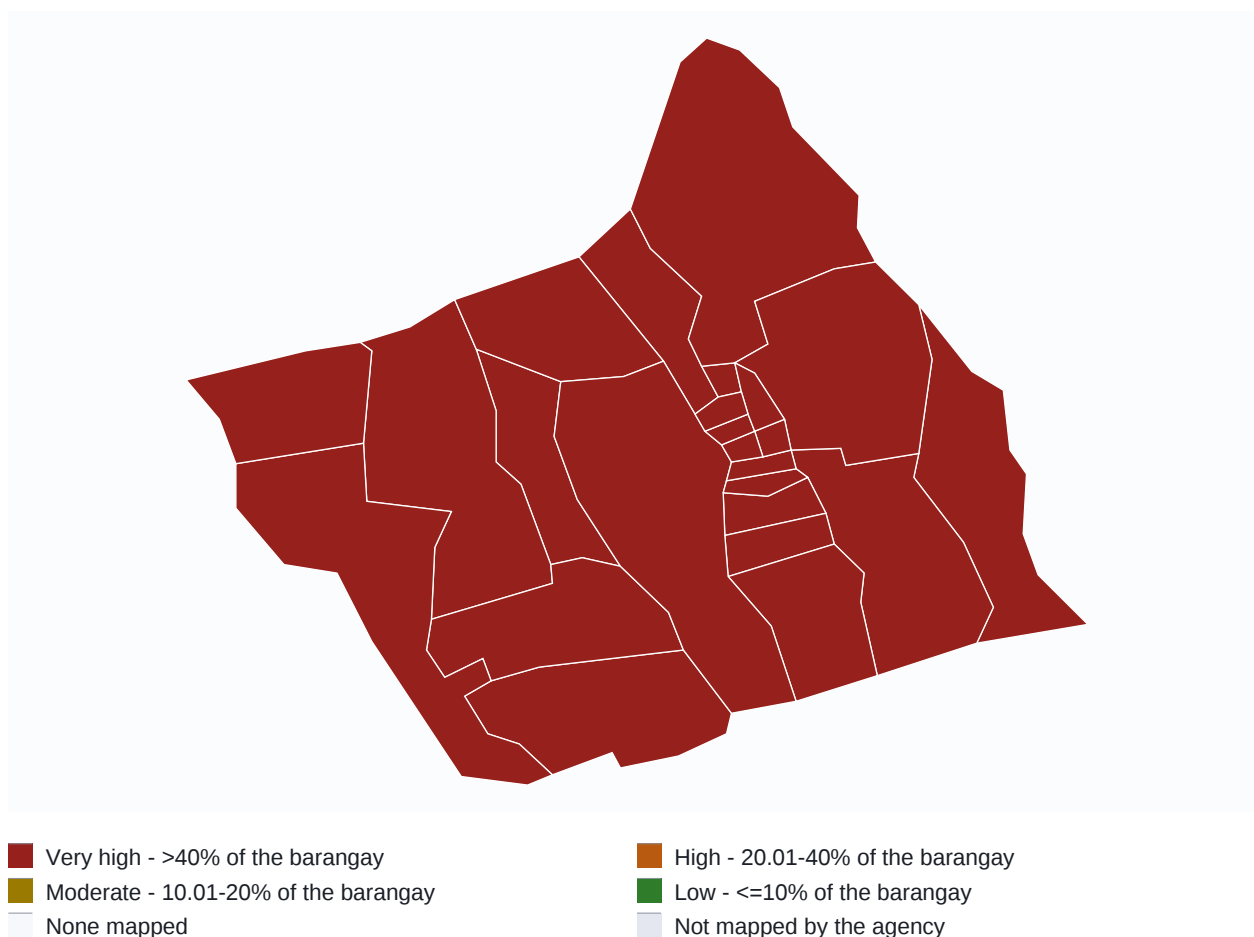


Figure 4. Ground Shaking susceptibility by barangay, banded to the DHSUD exposure scores.

Table 4.4. Ground Shaking: susceptible share by barangay

Barangay	Area (ha)	Susceptible share	Worst class	Exposure score
Anuling Cerca I	51.3	100.0%	VIII	4
Anuling Cerca II	141.2	100.0%	VIII	4
Anuling Lejos I	93.7	100.0%	VIII	4
Anuling Lejos II	79.3	100.0%	VIII	4
Asis I	43.9	100.0%	VIII	4
Asis II	3.9	100.0%	VIII	4
Asis III	185.3	100.0%	VIII	4
Banayad	94.4	100.0%	VIII	4
Bukal	101.7	100.0%	VIII	4
Galicía I	14.0	100.0%	VIII	4
Galicía II	16.6	100.0%	VIII	4
Galicía III	57.3	100.0%	VIII	4
Miguel Mojica	118.0	100.0%	VIII	4
Palocpoc I	140.8	100.0%	VIII	4

Barangay	Area (ha)	Susceptible share	Worst class	Exposure score
Palocpoc II	64.8	100.0%	VIII	4
Panungyan I	66.6	100.0%	VIII	4
Panungyan II	167.4	100.0%	VIII	4
Poblacion I	5.6	100.0%	VIII	4
Poblacion II	5.1	100.0%	VIII	4
Poblacion III	3.8	100.0%	VIII	4
Poblacion IV	3.2	100.0%	VIII	4
Poblacion V	3.2	100.0%	VIII	4
Poblacion VI	6.7	100.0%	VIII	4
Poblacion VII	4.9	100.0%	VIII	4

Source: DOST-PHIVOLCS

4.5 Liquefaction

The publishing agency returned no hazard polygons intersecting this municipality.

4.6 Earthquake-induced Landslide

No automated source is wired up for this hazard yet.

4.7 Ground Rupture

No automated source is wired up for this hazard yet.

5. Exposure Database

The exposure database is the barangay-by-hazard matrix the rest of the assessment is built on. A dash means the agency publishes no polygon covering that barangay for that hazard; it does not mean the barangay is not susceptible.

Table E. Susceptible share and exposure score, by barangay and hazard

Barangay	Flood	Rain-induced Landslide	Ground Shaking
Anuling Cerca I	6.2% (1)	8.6% (1)	100.0% (4)
Anuling Cerca II	6.0% (1)	3.0% (1)	100.0% (4)
Anuling Lejos I	9.3% (1)	0.0% (1)	100.0% (4)
Anuling Lejos II	5.9% (1)	0.0% (1)	100.0% (4)
Asis I	-	21.1% (3)	100.0% (4)
Asis II	0.6% (1)	0.0% (1)	100.0% (4)
Asis III	0.8% (1)	6.1% (1)	100.0% (4)
Banayad	11.1% (2)	0.0% (1)	100.0% (4)

Barangay	Flood	Rain-induced Landslide	Ground Shaking
Bukal	2.9% (1)	0.0% (1)	100.0% (4)
Galicia I	11.6% (2)	0.0% (1)	100.0% (4)
Galicia II	9.7% (1)	0.0% (1)	100.0% (4)
Galicia III	3.0% (1)	0.0% (1)	100.0% (4)
Miguel Mojica	3.5% (1)	0.0% (1)	100.0% (4)
Palocpoc I	13.7% (2)	0.0% (1)	100.0% (4)
Palocpoc II	5.7% (1)	0.0% (1)	100.0% (4)
Panungyan I	-	3.0% (1)	100.0% (4)
Panungyan II	9.9% (1)	0.9% (1)	100.0% (4)
Poblacion I	9.3% (1)	0.0% (1)	100.0% (4)
Poblacion II	10.5% (2)	0.0% (1)	100.0% (4)
Poblacion III	-	0.0% (1)	100.0% (4)
Poblacion IV	5.3% (1)	0.0% (1)	100.0% (4)
Poblacion V	-	7.6% (1)	100.0% (4)
Poblacion VI	2.7% (1)	0.0% (1)	100.0% (4)
Poblacion VII	-	12.0% (2)	100.0% (4)

Source: Computed from the agency hazard polygons clipped to the barangay outlines. The figure in brackets is the DHSUD exposure score that share earns.

6. Risk Assessment

Population and land-use exposure apply the barangay's susceptible AREA share to its population and its built-up area, because no source publishes where within a barangay people live. That is the standard simplification and the published CDRA makes it too, but it is an assumption rather than a measurement. Critical-facility exposure is the exception: those have coordinates, so it is a real point-in-polygon test.

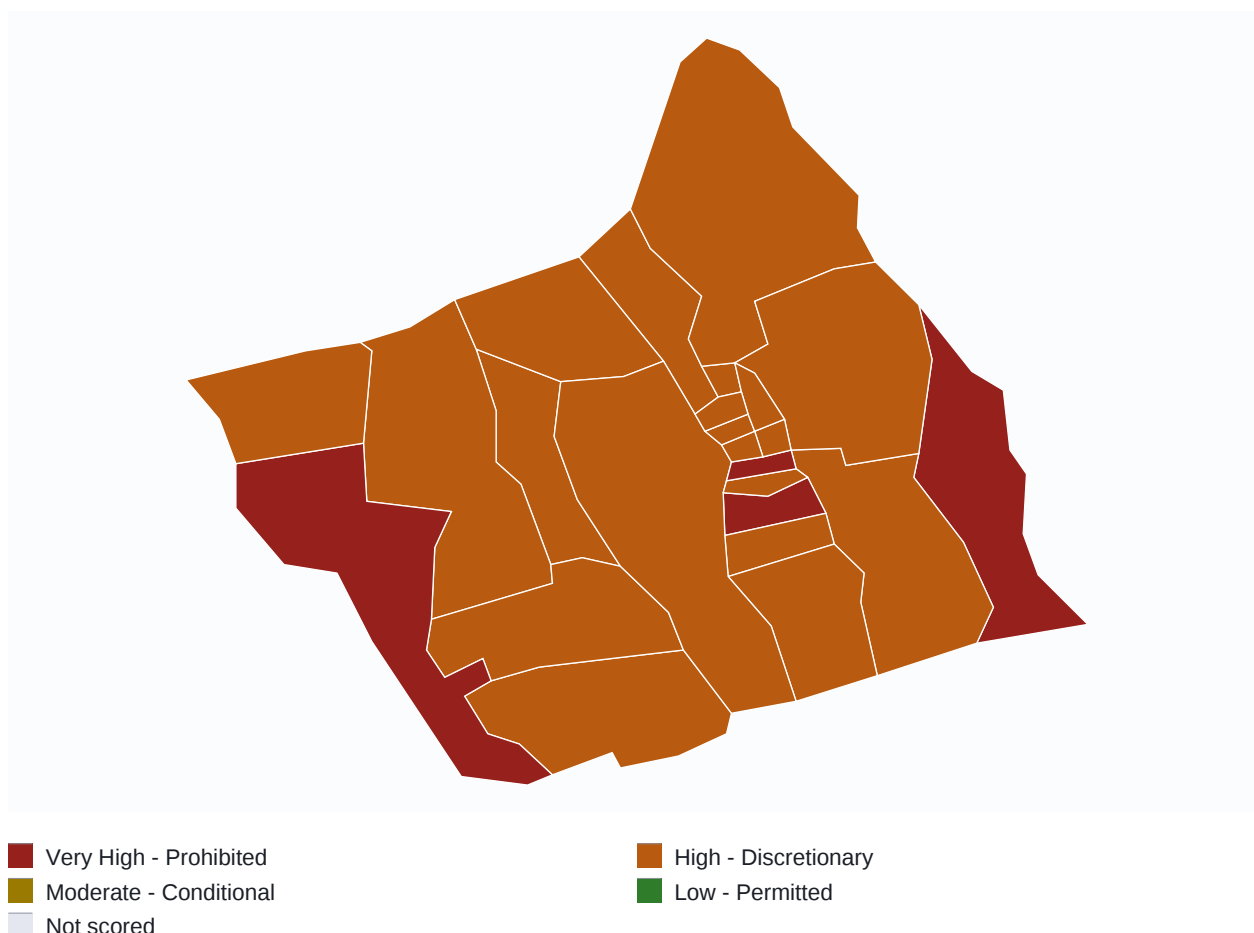


Figure R. Highest risk category reached in each barangay, across all hazards and exposure units.

Table F. Risk scores by barangay, hazard and exposure unit

Barangay	Hazard	Unit	E	S	AC	V	L	Sev	Risk	Category
Anuling Cerca I	Flood	Population	2	4	3	0.75	4	2.50	10.00	High
Anuling Cerca I	Flood	Urban Use Areas	1	1	3	0.25	4	1.00	4.00	Moderate
Anuling Cerca II	Flood	Population	2	4	3	0.75	4	2.50	10.00	High
Anuling Cerca II	Flood	Urban Use Areas	1	2	3	0.50	4	1.50	6.00	Moderate
Anuling Lejos I	Flood	Population	2	4	3	0.75	4	2.50	10.00	High
Anuling Lejos I	Flood	Urban Use Areas	1	2	3	0.50	4	1.50	6.00	Moderate
Anuling Lejos II	Flood	Population	2	4	3	0.75	4	2.50	10.00	High
Anuling Lejos II	Flood	Urban Use Areas	1	3	3	0.50	4	1.50	6.00	Moderate
Asis II	Flood	Population	1	4	3	0.75	4	2.00	8.00	High
Asis II	Flood	Urban Use Areas	1	3	3	0.50	4	1.50	6.00	Moderate
Asis III	Flood	Population	1	4	3	0.75	4	2.00	8.00	High
Asis III	Flood	Urban Use Areas	1	4	3	0.75	4	2.00	8.00	High
Banayad	Flood	Population	3	4	3	0.75	4	3.00	12.00	Very High
Banayad	Flood	Urban Use Areas	2	3	3	0.50	4	2.00	8.00	High
Bukal	Flood	Population	1	4	3	0.75	4	2.00	8.00	High
Bukal	Flood	Urban Use Areas	1	3	3	0.50	4	1.50	6.00	Moderate

Barangay	Hazard	Unit	E	S	AC	V	L	Sev	Risk	Category
Galicia I	Flood	Population	3	4	3	0.75	4	3.00	12.00	Very High
Galicia I	Flood	Urban Use Areas	2	4	3	0.75	4	2.50	10.00	High
Galicia II	Flood	Population	2	4	3	0.75	4	2.50	10.00	High
Galicia II	Flood	Urban Use Areas	1	4	3	0.75	4	2.00	8.00	High
Galicia III	Flood	Population	1	4	3	0.75	4	2.00	8.00	High
Galicia III	Flood	Urban Use Areas	1	2	3	0.50	4	1.50	6.00	Moderate
Miguel Mojica	Flood	Population	1	4	3	0.75	4	2.00	8.00	High
Miguel Mojica	Flood	Urban Use Areas	1	2	3	0.50	4	1.50	6.00	Moderate
Palocpoc I	Flood	Population	3	4	3	0.75	4	3.00	12.00	Very High
Palocpoc I	Flood	Urban Use Areas	2	3	3	0.50	4	2.00	8.00	High
Palocpoc II	Flood	Population	2	4	3	0.75	4	2.50	10.00	High
Palocpoc II	Flood	Urban Use Areas	1	2	3	0.50	4	1.50	6.00	Moderate
Panungyan II	Flood	Population	2	4	3	0.75	4	2.50	10.00	High
Panungyan II	Flood	Urban Use Areas	1	3	3	0.50	4	1.50	6.00	Moderate
Poblacion I	Flood	Population	2	4	3	0.75	4	2.50	10.00	High
Poblacion I	Flood	Urban Use Areas	1	3	3	0.50	4	1.50	6.00	Moderate
Poblacion II	Flood	Population	3	4	3	0.75	4	3.00	12.00	Very High
Poblacion II	Flood	Urban Use Areas	2	3	3	0.50	4	2.00	8.00	High
Poblacion IV	Flood	Population	2	4	3	0.75	4	2.50	10.00	High
Poblacion IV	Flood	Urban Use Areas	1	4	3	0.75	4	2.00	8.00	High
Poblacion VI	Flood	Population	1	4	3	0.75	4	2.00	8.00	High
Poblacion VI	Flood	Urban Use Areas	1	2	3	0.50	4	1.50	6.00	Moderate
Anuling Cerca I	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Anuling Cerca I	Ground Shaking	Urban Use Areas	4	1	3	0.25	3	2.50	7.50	High
Anuling Cerca II	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Anuling Cerca II	Ground Shaking	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Anuling Lejos I	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Anuling Lejos I	Ground Shaking	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Anuling Lejos II	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Anuling Lejos II	Ground Shaking	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Asis I	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Asis I	Ground Shaking	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Asis II	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Asis II	Ground Shaking	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Asis III	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Asis III	Ground Shaking	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
Banayad	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Banayad	Ground Shaking	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Bukal	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High

Barangay	Hazard	Unit	E	S	AC	V	L	Sev	Risk	Category
Bukal	Ground Shaking	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Galicia I	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Galicia I	Ground Shaking	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
Galicia II	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Galicia II	Ground Shaking	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
Galicia III	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Galicia III	Ground Shaking	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Miguel Mojica	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Miguel Mojica	Ground Shaking	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Palocpoc I	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Palocpoc I	Ground Shaking	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Palocpoc II	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Palocpoc II	Ground Shaking	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Panungyan I	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Panungyan I	Ground Shaking	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Panungyan II	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Panungyan II	Ground Shaking	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Poblacion I	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Poblacion I	Ground Shaking	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Poblacion II	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Poblacion II	Ground Shaking	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Poblacion III	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Poblacion III	Ground Shaking	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
Poblacion IV	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Poblacion IV	Ground Shaking	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
Poblacion V	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Poblacion V	Ground Shaking	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Poblacion VI	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Poblacion VI	Ground Shaking	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Poblacion VII	Ground Shaking	Population	4	4	3	0.75	3	3.50	10.50	High
Poblacion VII	Ground Shaking	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Anuling Cerca I	Rain-induced Landslide	Population	2	4	3	0.75	3	2.50	7.50	High
Anuling Cerca I	Rain-induced Landslide	Urban Use Areas	1	1	3	0.25	3	1.00	3.00	Moderate
Anuling Cerca II	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Anuling Cerca II	Rain-induced Landslide	Urban Use Areas	1	2	3	0.50	3	1.50	4.50	Moderate
Anuling Lejos I	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate

Barangay	Hazard	Unit	E	S	AC	V	L	Sev	Risk	Category
Anuling Lejos I	Rain-induced Landslide	Urban Use Areas	1	2	3	0.50	3	1.50	4.50	Moderate
Anuling Lejos II	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Anuling Lejos II	Rain-induced Landslide	Urban Use Areas	1	3	3	0.50	3	1.50	4.50	Moderate
Asis I	Rain-induced Landslide	Population	4	4	3	0.75	3	3.50	10.50	High
Asis I	Rain-induced Landslide	Urban Use Areas	3	3	3	0.50	3	2.50	7.50	High
Asis II	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Asis II	Rain-induced Landslide	Urban Use Areas	1	3	3	0.50	3	1.50	4.50	Moderate
Asis III	Rain-induced Landslide	Population	2	4	3	0.75	3	2.50	7.50	High
Asis III	Rain-induced Landslide	Urban Use Areas	1	4	3	0.75	3	2.00	6.00	Moderate
Banayad	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Banayad	Rain-induced Landslide	Urban Use Areas	1	3	3	0.50	3	1.50	4.50	Moderate
Bukal	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Bukal	Rain-induced Landslide	Urban Use Areas	1	3	3	0.50	3	1.50	4.50	Moderate
Galicia I	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Galicia I	Rain-induced Landslide	Urban Use Areas	1	4	3	0.75	3	2.00	6.00	Moderate
Galicia II	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Galicia II	Rain-induced Landslide	Urban Use Areas	1	4	3	0.75	3	2.00	6.00	Moderate
Galicia III	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Galicia III	Rain-induced Landslide	Urban Use Areas	1	2	3	0.50	3	1.50	4.50	Moderate
Miguel Mojica	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Miguel Mojica	Rain-induced Landslide	Urban Use Areas	1	2	3	0.50	3	1.50	4.50	Moderate
Palocpoc I	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Palocpoc I	Rain-induced Landslide	Urban Use Areas	1	3	3	0.50	3	1.50	4.50	Moderate
Palocpoc II	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Palocpoc II	Rain-induced Landslide	Urban Use Areas	1	2	3	0.50	3	1.50	4.50	Moderate

Barangay	Hazard	Unit	E	S	AC	V	L	Sev	Risk	Category
Panungyan I	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Panungyan I	Rain-induced Landslide	Urban Use Areas	1	2	3	0.50	3	1.50	4.50	Moderate
Panungyan II	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Panungyan II	Rain-induced Landslide	Urban Use Areas	1	3	3	0.50	3	1.50	4.50	Moderate
Poblacion I	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Poblacion I	Rain-induced Landslide	Urban Use Areas	1	3	3	0.50	3	1.50	4.50	Moderate
Poblacion II	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Poblacion II	Rain-induced Landslide	Urban Use Areas	1	3	3	0.50	3	1.50	4.50	Moderate
Poblacion III	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Poblacion III	Rain-induced Landslide	Urban Use Areas	1	4	3	0.75	3	2.00	6.00	Moderate
Poblacion IV	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Poblacion IV	Rain-induced Landslide	Urban Use Areas	1	4	3	0.75	3	2.00	6.00	Moderate
Poblacion V	Rain-induced Landslide	Population	2	4	3	0.75	3	2.50	7.50	High
Poblacion V	Rain-induced Landslide	Urban Use Areas	1	3	3	0.50	3	1.50	4.50	Moderate
Poblacion VI	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Poblacion VI	Rain-induced Landslide	Urban Use Areas	1	2	3	0.50	3	1.50	4.50	Moderate
Poblacion VII	Rain-induced Landslide	Population	3	4	3	0.75	3	3.00	9.00	High
Poblacion VII	Rain-induced Landslide	Urban Use Areas	2	2	3	0.50	3	2.00	6.00	Moderate

Source: E exposure, S sensitivity, AC adaptive capacity, V vulnerability, L likelihood, Sev severity of consequence. Computed by this system from the agency hazard data and the datasets the local government supplied.

6.1 Critical point facilities

Facility exposure is a point-in-polygon test against the hazard polygons, not a share applied to an area, so it is a measurement rather than an assumption.

Table G. Critical point facilities and their risk

Facility	Barangay	Hazard	Susceptibility	Risk	Category
Municipal Health Centre	Anuling Cerca I	Flood	-	-	-
Police Station	Anuling Cerca I	Flood	-	-	-
Municipal Hall	Anuling Cerca I	Flood	-	-	-

Facility	Barangay	Hazard	Susceptibility	Risk	Category
Central Elementary School	Anuling Cerca I	Flood	-	-	-
Fire Station	Anuling Cerca I	Flood	-	-	-
Public Market	Anuling Cerca II	Flood	-	-	-
Covered Court Evacuation Centre	Anuling Cerca II	Flood	-	-	-
District High School	Anuling Lejos I	Flood	-	-	-
Barangay Health Station	Anuling Lejos II	Flood	-	-	-
Water Pumping Station	Asis I	Flood	-	-	-
Central Elementary School	Anuling Cerca I	Rain-induced Landslide	LL	-	-
Fire Station	Anuling Cerca I	Rain-induced Landslide	LL	-	-
Police Station	Anuling Cerca I	Rain-induced Landslide	LL	-	-
Municipal Health Centre	Anuling Cerca I	Rain-induced Landslide	LL	-	-
Municipal Hall	Anuling Cerca I	Rain-induced Landslide	LL	-	-
Covered Court Evacuation Centre	Anuling Cerca II	Rain-induced Landslide	LL	-	-
Public Market	Anuling Cerca II	Rain-induced Landslide	LL	-	-
District High School	Anuling Lejos I	Rain-induced Landslide	LL	-	-
Barangay Health Station	Anuling Lejos II	Rain-induced Landslide	LL	-	-
Water Pumping Station	Asis I	Rain-induced Landslide	LL	-	-

Source: Point-in-polygon test against the agency hazard polygons.

7. What Is Still Needed

This section is deliberately prominent. An incomplete assessment that reads as complete is the failure with the worst consequences, because it gets submitted. Each row names the dataset that is missing, why it is missing, and which part of the assessment it blocks.

Table I. Outstanding datasets

Area	What is needed	Why it is missing	What it blocks
Drought	A hazard source	No automated source is wired up for this hazard yet.	Everything for this hazard
Earthquake-induced Landslide	A hazard source	No automated source is wired up for this hazard yet.	Everything for this hazard

Area	What is needed	Why it is missing	What it blocks
Ground Rupture	A hazard source	No automated source is wired up for this hazard yet.	Everything for this hazard
Land use by barangay	Area by land-use category per barangay	Awaiting the LGU data upload.	Urban-use and natural-resource exposure units
Sensitivity (CBMS)	Informal settlers, light-material dwellings, dependants	Awaiting the LGU data upload.	The sensitivity half of vulnerability
Adaptive capacity	The DHSUD questionnaire, per hazard	Awaiting the LGU data upload.	The adaptive-capacity half of vulnerability
Critical facilities	Facility list with coordinates	Awaiting the LGU data upload.	Critical-facility exposure
Replacement costs	Unit cost per land-use category	Awaiting the LGU data upload.	Damage estimates

8. Sources and Terms

Every figure in this assessment traces to one of the datasets below. The endpoint column records the service the data was retrieved from, so any figure can be checked against the publishing agency directly.

Table J. Source register

Dataset	Agency	Vintage or attribution	Retrieved	Used for
Administrative boundaries	faeldon/philippines-jsorps	PSAPs 2023-12-31 (PSA/NAMRIA via faeldon, MIT)	-	Municipality outline, barangay polygons, all area computations
Liquefaction Susceptibility	PHIVOLCS	DOST-PHIVOLCS (as of July 2018)	2026-09-08 12:59	Susceptibility class share per barangay
Ground Shaking (Deterministic)	PHIVOLCS	DOST-PHIVOLCS	2026-09-08 12:59	Susceptibility class share per barangay
Rain-induced Landslide Susceptibility	DENR-MGB	DENR-Mines and Geosciences Bureau	2026-09-08 12:57	Susceptibility class share per barangay
Flood Susceptibility	DENR-MGB	DENR-Mines and Geosciences Bureau	2026-09-08 12:56	Susceptibility class share per barangay

8.1 Terms

Table K. Terms used in this assessment

Term	Meaning
Exposure	The share of a barangay's people, area or facilities that falls inside a hazard-susceptible polygon, scored 1 to 4.
Sensitivity	The share of the exposed unit that is more easily harmed - informal settlers, light-material dwellings, dependants - scored 1 to 4.
Adaptive capacity	The local government's regulatory and institutional capacity to reduce harm, coded A to D and scored 1 to 4, inverted so that A scores 1.
Vulnerability	Sensitivity and adaptive capacity combined through the DHSUD vulnerability index, scored 0.25 to 1.00.

Term	Meaning
Severity of consequence	Exposure and vulnerability combined: (exposure + vulnerability) / 2.
Likelihood	The temporal probability of the hazard, from its return period, scored 1 to 4.
Risk score	Likelihood multiplied by severity of consequence, from 1 to 16.