



CLIMATE AND DISASTER RISK ASSESSMENT



PROVINCE OF ILOCOS SUR
CITY OF CANDON

Climate and Disaster Risk Assessment of City of Candon

Annex to the Comprehensive Land Use Plan
Planning period 2025-2031
Generated 3 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 42 barangays of the City of Candon, Province of Ilocos Sur (PSGC 0102906000). 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 city	10
Hazards with computed exposure	3
Datasets still outstanding	12
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 City

Table B. Profile of the city

Attribute	Value
City	City of Candon
Classification	City (component)
Province	Ilocos Sur
Region	Region I (Ilocos Region)
PSGC code	0102906000
Barangays	42
Has a coastline	Yes
Land area, GIS extent	7,782.8 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
Allangigan Primero	Urban	140.7	1,334	290
Allangigan Segundo	Urban	165.6	2,538	552
Amguid	Urban	255.1	5,403	1,175
Ayudante	Urban	149.0	1,908	415
Bagani Camposanto	Rural	192.3	3,586	780
Bagani Gabor	Rural	58.8	604	131
Bagani Tocgo	Rural	70.0	1,129	245
Bagani Ubbog	Rural	145.8	3,202	696
Bagar	Rural	116.5	1,584	344
Balingaoan	Rural	352.3	6,849	1,489
Bugnay	Rural	782.4	8,656	1,882
Calaoaan	Rural	169.6	2,868	623
Calongbuyan	Rural	123.8	2,817	612
Caterman	Rural	513.2	7,381	1,605
Cubcubbuot	Rural	208.0	4,208	915
Darapidap	Rural	275.0	3,259	708
Langlangca Primero	Rural	142.9	2,529	550
Langlangca Segundo	Rural	203.0	4,779	1,039
Oaig-Daya	Rural	292.7	4,441	965
Palacapac	Rural	244.4	5,137	1,117
Paras	Rural	77.9	985	214
Parioc Primero	Rural	318.4	5,888	1,280
Parioc Segundo	Rural	396.5	4,010	872
Patpata Primero	Rural	57.8	922	200
Patpata Segundo	Rural	82.9	1,809	393
Paypayad	Rural	157.3	2,113	459
Salvador Primero	Rural	193.4	3,729	811
Salvador Segundo	Rural	166.2	1,813	394
San Agustin	Rural	172.2	2,885	627
San Andres	Rural	154.1	3,482	757

Barangay	Class	Area (ha)	Population	Households
San Antonio	Rural	11.9	300	65
San Isidro	Rural	16.2	326	71
San Jose	Rural	29.0	339	74
San Juan	Rural	14.4	300	65
San Nicolas	Rural	139.5	3,263	709
San Pedro	Rural	12.7	300	65
Santo Tomas	Rural	97.2	2,028	441
Tablac	Rural	612.8	7,651	1,663
Talogtog	Rural	166.5	3,052	663
Tamurong Primero	Rural	84.4	840	183
Tamurong Segundo	Rural	141.2	2,231	485
Villarica	Rural	79.2	1,715	373

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 124,193 in 26,997 households.

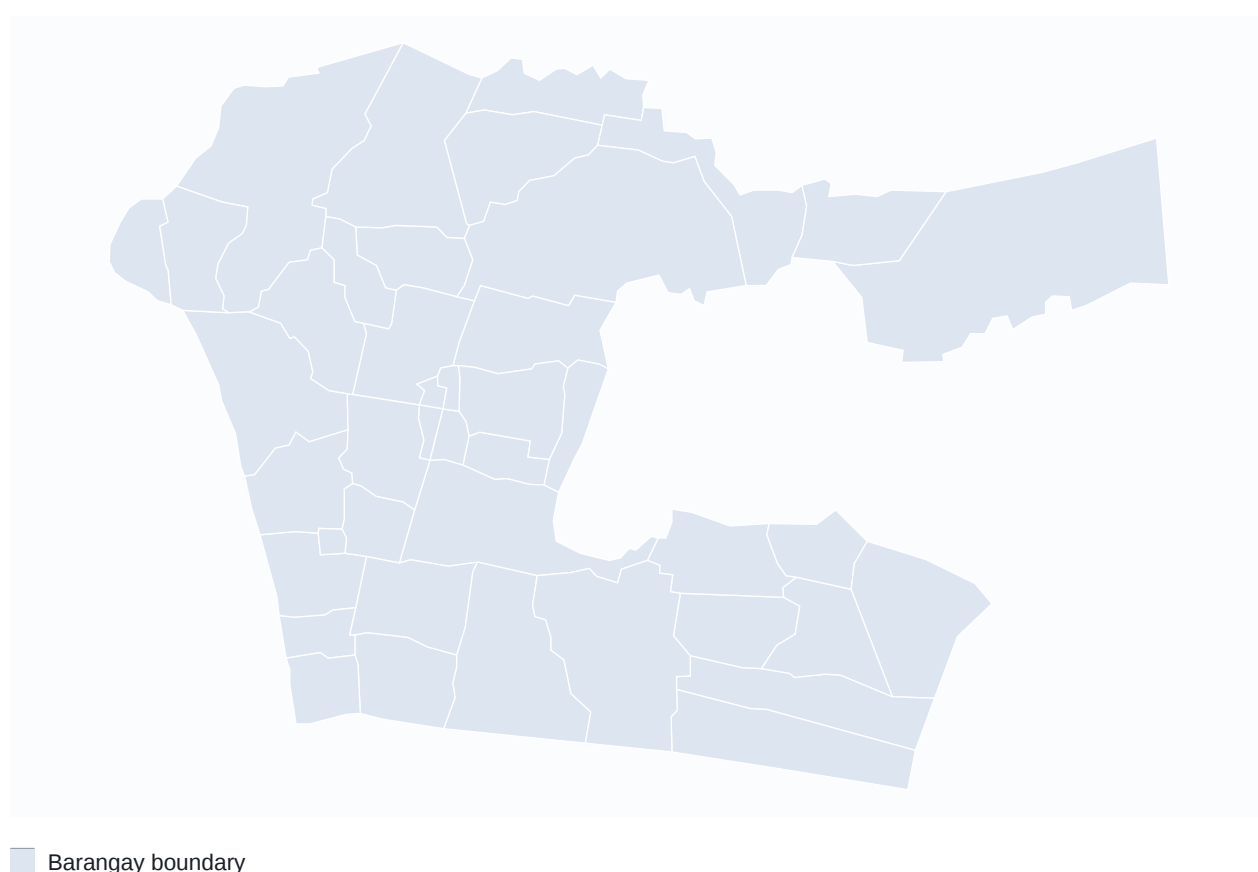


Figure 1. Barangay boundaries of the city.

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.
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)

Exposure unit	Parameter	Score	Threshold
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 city 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	41 of 42 barangays
Rain-induced Landslide	hydrometeorological	DENR-MGB	Computed	20 of 42 barangays
Drought	hydrometeorological	PAAGASA	Pending	-
Storm Surge	hydrometeorological	PAAGASA / Project NOAH	Pending	-
Sea Level Rise	hydrometeorological	PAAGASA	Pending	-
Ground Shaking	geological	PHIVOLCS	Manual	-
Liquefaction	geological	PHIVOLCS	Computed	41 of 42 barangays

Hazard	Group	Publishing agency	Status	Coverage
Earthquake-induced Landslide	geological	PHIVOLCS	Manual	-
Ground Rupture	geological	PHIVOLCS	Pending	-
Tsunami	geological	PHIVOLCS	Manual	-

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. 41 of the 42 barangays carry at least one susceptibility class. The measurement used 144 features retrieved on 2026-09-03 from the FloodSusc field.

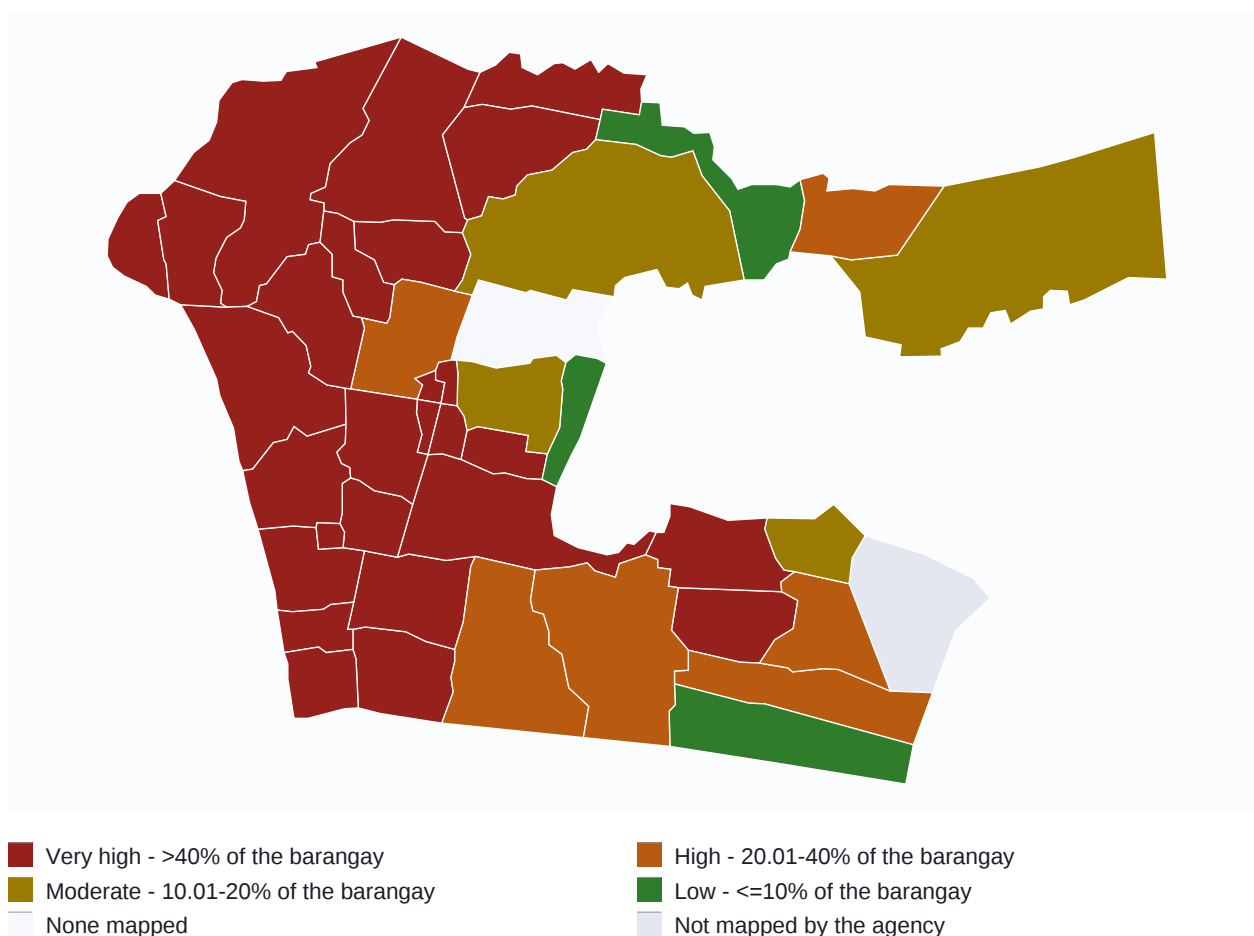


Figure 2. Flood susceptibility by barangay, banded to the DHSUD exposure scores.

Table 4.1. Flood: susceptible share by barangay

Barangay	Area (ha)	Susceptible share	Worst class	Exposure score
Allangigan Primero	140.7	64.7%	HF	4
Allangigan Segundo	165.6	86.6%	VHF	4
Ayudante	149.0	50.8%	HF	4
Bagani Camposanto	192.3	0.0%	LF	1
Bagani Gabor	58.8	71.9%	HF	4

Barangay	Area (ha)	Susceptible share	Worst class	Exposure score
Bagani Tocgo	70.0	7.1%	HF	1
Bagani Ubbog	145.8	18.9%	MF	2
Bagar	116.5	97.8%	HF	4
Balingaoan	352.3	50.3%	HF	4
Bugnay	782.4	10.8%	VHF	2
Calaoaan	169.6	100.0%	HF	4
Calongbuyan	123.8	90.9%	HF	4
Caterman	513.2	54.2%	HF	4
Cubcubbuot	208.0	32.0%	HF	3
Darapidap	275.0	95.1%	HF	4
Langlangca Primero	142.9	72.2%	HF	4
Langlangca Segundo	203.0	85.1%	HF	4
Oaig-Daya	292.7	100.0%	VHF	4
Palacapac	244.4	9.7%	HF	1
Paras	77.9	100.0%	HF	4
Parioc Primero	318.4	34.5%	HF	3
Parioc Segundo	396.5	33.3%	HF	3
Patpata Primero	57.8	90.3%	HF	4
Patpata Segundo	82.9	80.1%	VHF	4
Paypayad	157.3	96.3%	HF	4
Salvador Primero	193.4	8.9%	VHF	1
Salvador Segundo	166.2	28.7%	VHF	3
San Agustin	172.2	35.1%	HF	3
San Andres	154.1	31.1%	HF	3
San Antonio	11.9	72.2%	MF	4
San Isidro	16.2	100.0%	HF	4
San Jose	29.0	100.0%	HF	4
San Juan	14.4	44.7%	MF	4
San Nicolas	139.5	100.0%	HF	4
San Pedro	12.7	100.0%	MF	4
Santo Tomas	97.2	10.2%	MF	2
Tablac	612.8	11.2%	HF	2
Talogtog	166.5	100.0%	HF	4
Tamurong Primero	84.4	97.2%	HF	4
Tamurong Segundo	141.2	95.1%	HF	4

Barangay	Area (ha)	Susceptible share	Worst class	Exposure score
Villarica	79.2	100.0%	HF	4

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. 20 of the 42 barangays carry at least one susceptibility class. The measurement used 161 features retrieved on 2026-09-03 from the LndslideSusc field.

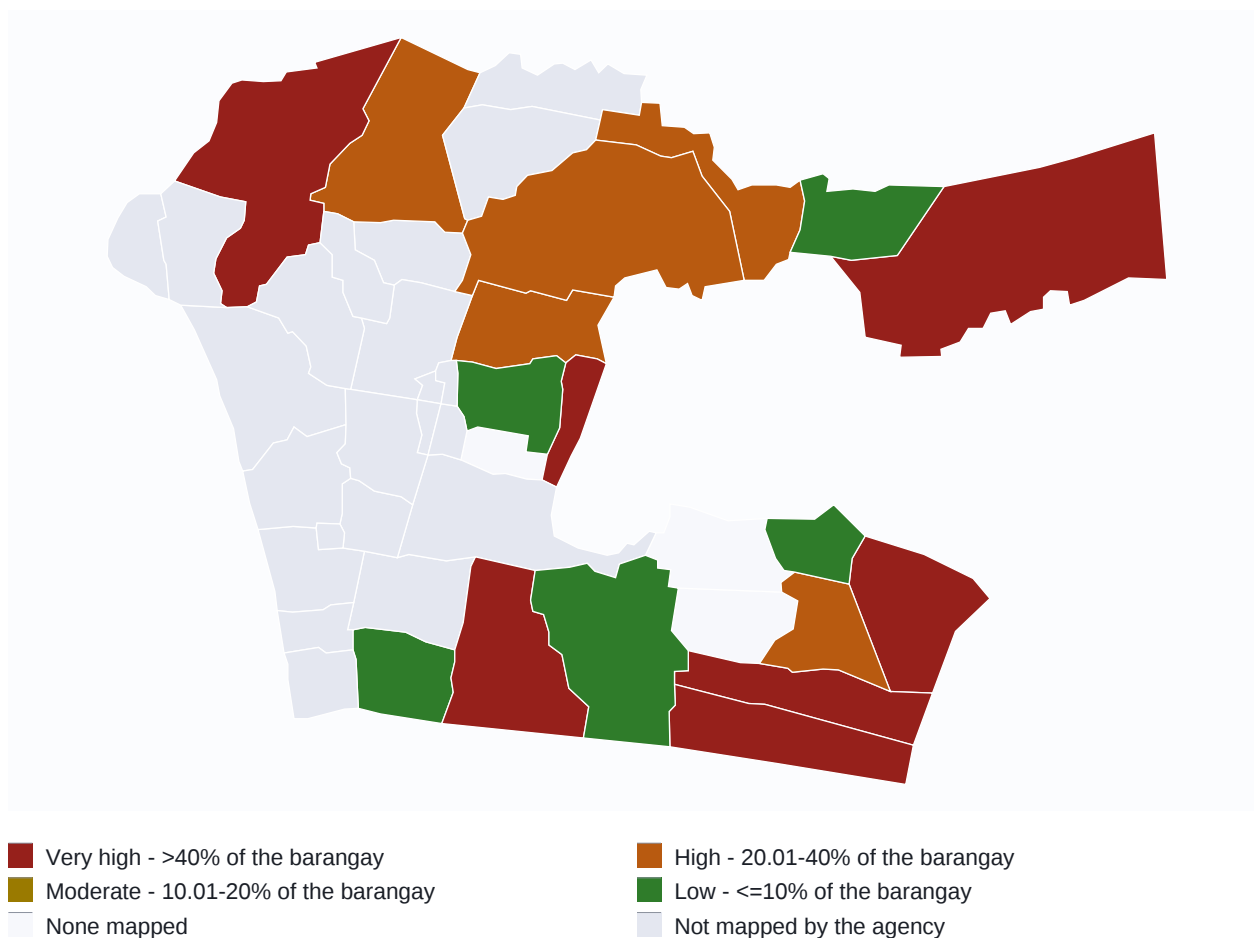


Figure 3. Rain-induced Landslide susceptibility by barangay, banded to the DHSUD exposure scores.

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

Barangay	Area (ha)	Susceptible share	Worst class	Exposure score
Allangigan Primero	140.7	0.0%	LL	1
Allangigan Segundo	165.6	0.0%	LL	1
Amguid	255.1	87.3%	VHL	4
Ayudante	149.0	1.8%	ML	1
Bagani Camposanto	192.3	20.5%	HL	3
Bagani Gabor	58.8	0.0%	LL	1

Barangay	Area (ha)	Susceptible share	Worst class	Exposure score
Bagani Tocgo	70.0	43.4%	ML	4
Bagani Ubbog	145.8	0.0%	ML	1
Balingaoan	352.3	22.8%	HL	3
Bugnay	782.4	75.9%	HL	4
Caterman	513.2	43.1%	ML	4
Cubcubbuot	208.0	56.6%	ML	4
Palacapac	244.4	67.6%	ML	4
Parioc Primero	318.4	41.9%	ML	4
Parioc Segundo	396.5	8.1%	ML	1
Salvador Primero	193.4	27.0%	HL	3
Salvador Segundo	166.2	8.5%	HL	1
San Andres	154.1	31.3%	ML	3
Santo Tomas	97.2	5.7%	ML	1
Tablac	612.8	36.5%	HL	3

Source: DENR-Mines and Geosciences Bureau

4.3 Drought

No automated source is wired up for this hazard yet.

4.4 Storm Surge

No automated source is wired up for this hazard yet.

4.5 Sea Level Rise

No automated source is wired up for this hazard yet.

4.6 Ground Shaking

The publishing agency will not serve this layer for computation, so susceptibility has to be entered per barangay by the planner.

4.7 Liquefaction

Susceptibility polygons published by PHIVOLCS were clipped to each barangay and the share of the barangay in each susceptibility class measured. 41 of the 42 barangays carry at least one susceptibility class. The measurement used 3 features retrieved on 2026-09-03 from the lccode field.

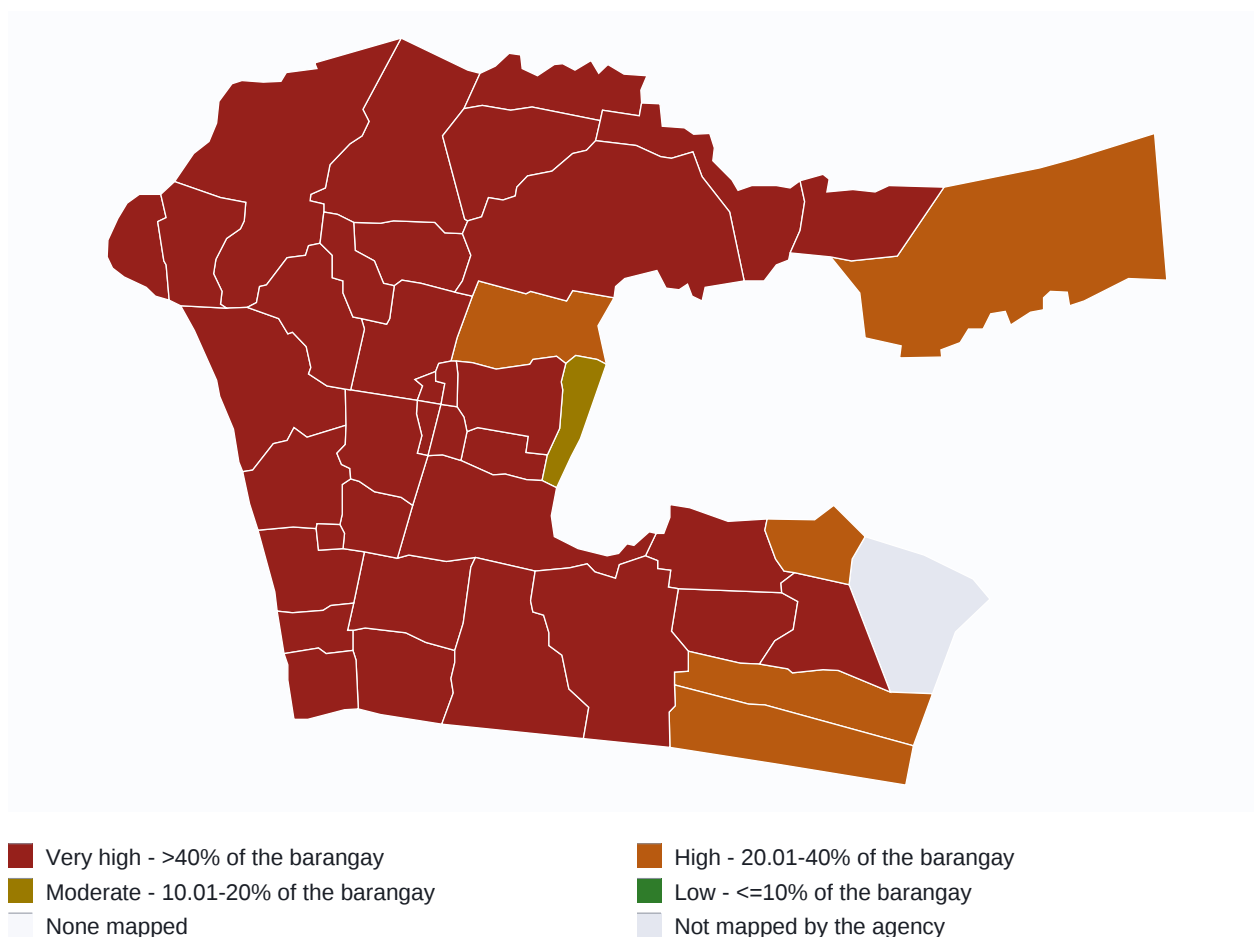


Figure 4. Liquefaction susceptibility by barangay, banded to the DHSUD exposure scores.

Table 4.7. Liquefaction: susceptible share by barangay

Barangay	Area (ha)	Susceptible share	Worst class	Exposure score
Allangigan Primero	140.7	72.7%	Least Susceptible	4
Allangigan Segundo	165.6	92.5%	Least Susceptible	4
Ayudante	149.0	99.4%	Highly Susceptible	4
Bagani Camposanto	192.3	32.7%	Moderately Susceptible	3
Bagani Gabor	58.8	100.0%	Moderately Susceptible	4
Bagani Tocgo	70.0	10.1%	Moderately Susceptible	2
Bagani Ubbog	145.8	57.5%	Moderately Susceptible	4
Bagar	116.5	100.0%	Highly Susceptible	4
Balingaoan	352.3	66.7%	Highly Susceptible	4
Bugnay	782.4	21.6%	Least Susceptible	3
Calaoaan	169.6	100.0%	Highly Susceptible	4
Calongbuyan	123.8	100.0%	Highly Susceptible	4

Barangay	Area (ha)	Susceptible share	Worst class	Exposure score
Caterman	513.2	51.6%	Highly Susceptible	4
Cubcubbuot	208.0	30.3%	Least Susceptible	3
Darapidap	275.0	98.7%	Highly Susceptible	4
Langlangca Primero	142.9	100.0%	Moderately Susceptible	4
Langlangca Segundo	203.0	100.0%	Highly Susceptible	4
Oaig-Daya	292.7	100.0%	Highly Susceptible	4
Palacapac	244.4	23.7%	Least Susceptible	3
Paras	77.9	100.0%	Highly Susceptible	4
Parioc Primero	318.4	63.2%	Moderately Susceptible	4
Parioc Segundo	396.5	58.4%	Least Susceptible	4
Patpata Primero	57.8	96.1%	Highly Susceptible	4
Patpata Segundo	82.9	93.4%	Highly Susceptible	4
Paypayad	157.3	99.7%	Highly Susceptible	4
Salvador Primero	193.4	67.0%	Least Susceptible	4
Salvador Segundo	166.2	94.6%	Least Susceptible	4
San Agustin	172.2	100.0%	Highly Susceptible	4
San Andres	154.1	40.5%	Least Susceptible	4
San Antonio	11.9	100.0%	Highly Susceptible	4
San Isidro	16.2	100.0%	Highly Susceptible	4
San Jose	29.0	100.0%	Highly Susceptible	4
San Juan	14.4	100.0%	Moderately Susceptible	4
San Nicolas	139.5	100.0%	Highly Susceptible	4
San Pedro	12.7	100.0%	Highly Susceptible	4
Santo Tomas	97.2	24.2%	Least Susceptible	3
Tablac	612.8	45.0%	Highly Susceptible	4
Talogtog	166.5	100.0%	Highly Susceptible	4
Tamurong Primero	84.4	93.7%	Highly Susceptible	4
Tamurong Segundo	141.2	98.3%	Highly Susceptible	4
Villarica	79.2	100.0%	Highly Susceptible	4

Source: DOST-PHIVOLCS (as of July 2018)

4.8 Earthquake-induced Landslide

The publishing agency will not serve this layer for computation, so susceptibility has to be entered per barangay by the planner.

4.9 Ground Rupture

No automated source is wired up for this hazard yet.

4.10 Tsunami

The publishing agency will not serve this layer for computation, so susceptibility has to be entered per barangay by the planner.

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	Liquefaction
Allangigan Primero	64.7% (4)	0.0% (1)	72.7% (4)
Allangigan Segundo	86.6% (4)	0.0% (1)	92.5% (4)
Amguid	-	87.2% (4)	-
Ayudante	50.8% (4)	1.8% (1)	99.3% (4)
Bagani Camposanto	0.0% (1)	20.5% (3)	32.7% (3)
Bagani Gabor	71.9% (4)	0.0% (1)	100.0% (4)
Bagani Tocgo	7.1% (1)	43.4% (4)	10.1% (2)
Bagani Ubbog	18.9% (2)	0.0% (1)	57.5% (4)
Bagar	97.8% (4)	-	100.0% (4)
Balingaoan	50.3% (4)	22.8% (3)	66.7% (4)
Bugnay	10.8% (2)	75.8% (4)	21.6% (3)
Calaoaan	100.0% (4)	-	100.0% (4)
Calongbuyan	90.9% (4)	-	100.0% (4)
Caterman	54.2% (4)	43.1% (4)	51.6% (4)
Cubcubbuot	32.0% (3)	56.5% (4)	30.3% (3)
Darapidap	95.1% (4)	-	98.7% (4)
Langlangca Primero	72.2% (4)	-	100.0% (4)
Langlangca Segundo	85.1% (4)	-	100.0% (4)
Oaig-Daya	100.0% (4)	-	100.0% (4)
Palacapac	9.7% (1)	67.6% (4)	23.7% (3)

Barangay	Flood	Rain-induced Landslide	Liquefaction
Paras	100.0% (4)	-	100.0% (4)
Parioc Primero	34.5% (3)	41.9% (4)	63.2% (4)
Parioc Segundo	33.3% (3)	8.1% (1)	58.4% (4)
Patpata Primero	90.3% (4)	-	96.1% (4)
Patpata Segundo	80.1% (4)	-	93.4% (4)
Paypayad	96.3% (4)	-	99.7% (4)
Salvador Primero	8.9% (1)	27.0% (3)	67.0% (4)
Salvador Segundo	28.7% (3)	8.5% (1)	94.6% (4)
San Agustin	35.1% (3)	-	100.0% (4)
San Andres	31.1% (3)	31.2% (3)	40.5% (4)
San Antonio	72.2% (4)	-	100.0% (4)
San Isidro	100.0% (4)	-	100.0% (4)
San Jose	100.0% (4)	-	100.0% (4)
San Juan	44.6% (4)	-	100.0% (4)
San Nicolas	100.0% (4)	-	100.0% (4)
San Pedro	100.0% (4)	-	100.0% (4)
Santo Tomas	10.2% (2)	5.7% (1)	24.1% (3)
Tablac	11.2% (2)	36.5% (3)	45.0% (4)
Talogtog	100.0% (4)	-	100.0% (4)
Tamurong Primero	97.2% (4)	-	93.7% (4)
Tamurong Segundo	95.0% (4)	-	98.3% (4)
Villarica	100.0% (4)	-	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.

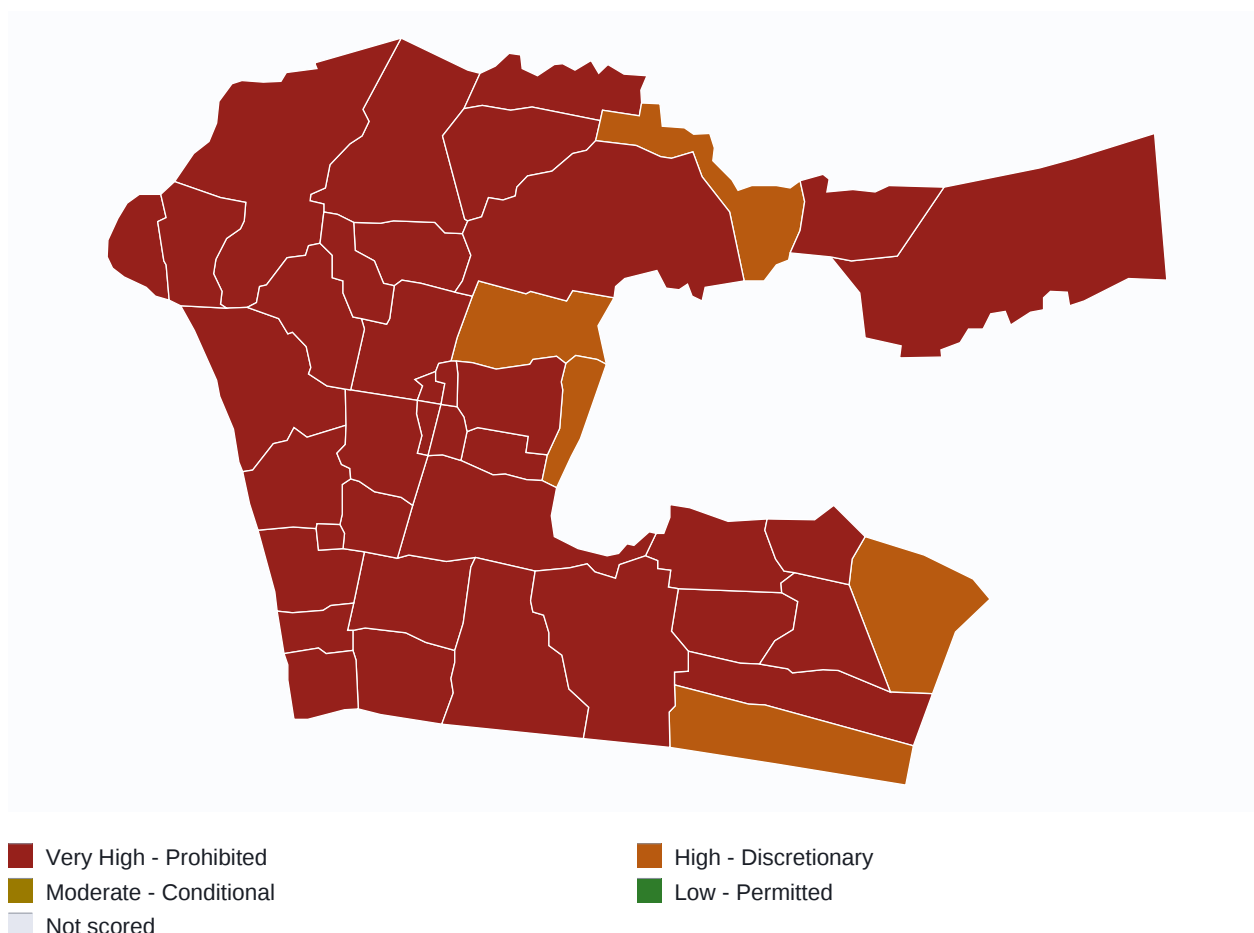


Figure R. Highest risk category reached in each barangay, across all hazards and exposure units.

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

Barangay	Hazard	Unit	E	S	AC	V	L	Sev	Risk	Category
Allangigan Primero	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Allangigan Primero	Flood	Urban Use Areas	4	1	3	0.25	4	2.50	10.00	High
Allangigan Segundo	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Allangigan Segundo	Flood	Urban Use Areas	4	2	3	0.50	4	3.00	12.00	Very High
Ayudante	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Ayudante	Flood	Urban Use Areas	4	3	3	0.50	4	3.00	12.00	Very High
Bagani Camposanto	Flood	Population	1	4	3	0.75	4	2.00	8.00	High
Bagani Camposanto	Flood	Urban Use Areas	1	3	3	0.50	4	1.50	6.00	Moderate
Bagani Gabor	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Bagani Gabor	Flood	Urban Use Areas	4	3	3	0.50	4	3.00	12.00	Very High
Bagani Tocgo	Flood	Population	2	4	3	0.75	4	2.50	10.00	High
Bagani Tocgo	Flood	Urban Use Areas	1	4	3	0.75	4	2.00	8.00	High
Bagani Ubbog	Flood	Population	3	4	3	0.75	4	3.00	12.00	Very High
Bagani Ubbog	Flood	Urban Use Areas	2	3	3	0.50	4	2.00	8.00	High
Bagar	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Bagar	Flood	Urban Use Areas	4	3	3	0.50	4	3.00	12.00	Very High

Barangay	Hazard	Unit	E	S	AC	V	L	Sev	Risk	Category
Balingaoan	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Balingaoan	Flood	Urban Use Areas	4	4	3	0.75	4	3.50	14.00	Very High
Bugnay	Flood	Population	3	4	3	0.75	4	3.00	12.00	Very High
Bugnay	Flood	Urban Use Areas	2	4	3	0.75	4	2.50	10.00	High
Calaoaan	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Calaoaan	Flood	Urban Use Areas	4	2	3	0.50	4	3.00	12.00	Very High
Calongbuyan	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Calongbuyan	Flood	Urban Use Areas	4	2	3	0.50	4	3.00	12.00	Very High
Caterman	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Caterman	Flood	Urban Use Areas	4	3	3	0.50	4	3.00	12.00	Very High
Cubcubbuot	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Cubcubbuot	Flood	Urban Use Areas	3	2	3	0.50	4	2.50	10.00	High
Darapidap	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Darapidap	Flood	Urban Use Areas	4	2	3	0.50	4	3.00	12.00	Very High
Langlangca Primero	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Langlangca Primero	Flood	Urban Use Areas	4	3	3	0.50	4	3.00	12.00	Very High
Langlangca Segundo	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Langlangca Segundo	Flood	Urban Use Areas	4	3	3	0.50	4	3.00	12.00	Very High
Oaig-Daya	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Oaig-Daya	Flood	Urban Use Areas	4	4	3	0.75	4	3.50	14.00	Very High
Palacapac	Flood	Population	2	4	3	0.75	4	2.50	10.00	High
Palacapac	Flood	Urban Use Areas	1	4	3	0.75	4	2.00	8.00	High
Paras	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Paras	Flood	Urban Use Areas	4	4	3	0.75	4	3.50	14.00	Very High
Parioc Primero	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Parioc Primero	Flood	Urban Use Areas	3	3	3	0.50	4	2.50	10.00	High
Parioc Segundo	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Parioc Segundo	Flood	Urban Use Areas	3	1	3	0.25	4	2.00	8.00	High
Patpata Primero	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Patpata Primero	Flood	Urban Use Areas	4	2	3	0.50	4	3.00	12.00	Very High
Patpata Segundo	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Patpata Segundo	Flood	Urban Use Areas	4	2	3	0.50	4	3.00	12.00	Very High
Paypayad	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Paypayad	Flood	Urban Use Areas	4	3	3	0.50	4	3.00	12.00	Very High
Salvador Primero	Flood	Population	2	4	3	0.75	4	2.50	10.00	High
Salvador Primero	Flood	Urban Use Areas	1	3	3	0.50	4	1.50	6.00	Moderate
Salvador Segundo	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Salvador Segundo	Flood	Urban Use Areas	3	4	3	0.75	4	3.00	12.00	Very High
San Agustin	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High

Barangay	Hazard	Unit	E	S	AC	V	L	Sev	Risk	Category
San Agustin	Flood	Urban Use Areas	3	2	3	0.50	4	2.50	10.00	High
San Andres	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
San Andres	Flood	Urban Use Areas	3	3	3	0.50	4	2.50	10.00	High
San Antonio	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
San Antonio	Flood	Urban Use Areas	4	3	3	0.50	4	3.00	12.00	Very High
San Isidro	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
San Isidro	Flood	Urban Use Areas	4	4	3	0.75	4	3.50	14.00	Very High
San Jose	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
San Jose	Flood	Urban Use Areas	4	4	3	0.75	4	3.50	14.00	Very High
San Juan	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
San Juan	Flood	Urban Use Areas	4	2	3	0.50	4	3.00	12.00	Very High
San Nicolas	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
San Nicolas	Flood	Urban Use Areas	4	3	3	0.50	4	3.00	12.00	Very High
San Pedro	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
San Pedro	Flood	Urban Use Areas	4	2	3	0.50	4	3.00	12.00	Very High
Santo Tomas	Flood	Population	3	4	3	0.75	4	3.00	12.00	Very High
Santo Tomas	Flood	Urban Use Areas	2	2	3	0.50	4	2.00	8.00	High
Tablac	Flood	Population	3	4	3	0.75	4	3.00	12.00	Very High
Tablac	Flood	Urban Use Areas	2	2	3	0.50	4	2.00	8.00	High
Talogtog	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Talogtog	Flood	Urban Use Areas	4	3	3	0.50	4	3.00	12.00	Very High
Tamurong Primero	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Tamurong Primero	Flood	Urban Use Areas	4	3	3	0.50	4	3.00	12.00	Very High
Tamurong Segundo	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Tamurong Segundo	Flood	Urban Use Areas	4	4	3	0.75	4	3.50	14.00	Very High
Villarica	Flood	Population	4	4	3	0.75	4	3.50	14.00	Very High
Villarica	Flood	Urban Use Areas	4	4	3	0.75	4	3.50	14.00	Very High
Allangigan Primero	Liquefaction	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Allangigan Primero	Liquefaction	Urban Use Areas	1	1	3	0.25	3	1.00	3.00	Moderate
Allangigan Segundo	Liquefaction	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Allangigan Segundo	Liquefaction	Urban Use Areas	1	2	3	0.50	3	1.50	4.50	Moderate
Ayudante	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Ayudante	Liquefaction	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Bagani Camposanto	Liquefaction	Population	3	4	3	0.75	3	3.00	9.00	High
Bagani Camposanto	Liquefaction	Urban Use Areas	2	3	3	0.50	3	2.00	6.00	Moderate
Bagani Gabor	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Bagani Gabor	Liquefaction	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Bagani Tocgo	Liquefaction	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Bagani Tocgo	Liquefaction	Urban Use Areas	1	4	3	0.75	3	2.00	6.00	Moderate

Barangay	Hazard	Unit	E	S	AC	V	L	Sev	Risk	Category
Bagani Ubbog	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Bagani Ubbog	Liquefaction	Urban Use Areas	3	3	3	0.50	3	2.50	7.50	High
Bagar	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Bagar	Liquefaction	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Balingaoan	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Balingaoan	Liquefaction	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
Bugnay	Liquefaction	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Bugnay	Liquefaction	Urban Use Areas	1	4	3	0.75	3	2.00	6.00	Moderate
Calaoaan	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Calaoaan	Liquefaction	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Calongbuyan	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Calongbuyan	Liquefaction	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Caterman	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Caterman	Liquefaction	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Cubcubbuot	Liquefaction	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Cubcubbuot	Liquefaction	Urban Use Areas	1	2	3	0.50	3	1.50	4.50	Moderate
Darapidap	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Darapidap	Liquefaction	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Langlangca Primero	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Langlangca Primero	Liquefaction	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Langlangca Segundo	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Langlangca Segundo	Liquefaction	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Oaig-Daya	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Oaig-Daya	Liquefaction	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
Palacapac	Liquefaction	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Palacapac	Liquefaction	Urban Use Areas	1	4	3	0.75	3	2.00	6.00	Moderate
Paras	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Paras	Liquefaction	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
Parioc Primero	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Parioc Primero	Liquefaction	Urban Use Areas	3	3	3	0.50	3	2.50	7.50	High
Parioc Segundo	Liquefaction	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Parioc Segundo	Liquefaction	Urban Use Areas	1	1	3	0.25	3	1.00	3.00	Moderate
Patpata Primero	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Patpata Primero	Liquefaction	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Patpata Segundo	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Patpata Segundo	Liquefaction	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Paypayad	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Paypayad	Liquefaction	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Salvador Primero	Liquefaction	Population	1	4	3	0.75	3	2.00	6.00	Moderate

Barangay	Hazard	Unit	E	S	AC	V	L	Sev	Risk	Category
Salvador Primero	Liquefaction	Urban Use Areas	1	3	3	0.50	3	1.50	4.50	Moderate
Salvador Segundo	Liquefaction	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Salvador Segundo	Liquefaction	Urban Use Areas	1	4	3	0.75	3	2.00	6.00	Moderate
San Agustin	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
San Agustin	Liquefaction	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
San Andres	Liquefaction	Population	1	4	3	0.75	3	2.00	6.00	Moderate
San Andres	Liquefaction	Urban Use Areas	1	3	3	0.50	3	1.50	4.50	Moderate
San Antonio	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
San Antonio	Liquefaction	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
San Isidro	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
San Isidro	Liquefaction	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
San Jose	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
San Jose	Liquefaction	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
San Juan	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
San Juan	Liquefaction	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
San Nicolas	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
San Nicolas	Liquefaction	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
San Pedro	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
San Pedro	Liquefaction	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Santo Tomas	Liquefaction	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Santo Tomas	Liquefaction	Urban Use Areas	1	2	3	0.50	3	1.50	4.50	Moderate
Tablac	Liquefaction	Population	3	4	3	0.75	3	3.00	9.00	High
Tablac	Liquefaction	Urban Use Areas	2	2	3	0.50	3	2.00	6.00	Moderate
Talogtog	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Talogtog	Liquefaction	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Tamurong Primero	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Tamurong Primero	Liquefaction	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Tamurong Segundo	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Tamurong Segundo	Liquefaction	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
Villarica	Liquefaction	Population	4	4	3	0.75	3	3.50	10.50	High
Villarica	Liquefaction	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
Allangigan Primero	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Allangigan Primero	Rain-induced Landslide	Urban Use Areas	1	1	3	0.25	3	1.00	3.00	Moderate
Allangigan Segundo	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Allangigan Segundo	Rain-induced Landslide	Urban Use Areas	1	2	3	0.50	3	1.50	4.50	Moderate
Amguid	Rain-induced Landslide	Population	4	4	3	0.75	3	3.50	10.50	High

Barangay	Hazard	Unit	E	S	AC	V	L	Sev	Risk	Category
Amguid	Rain-induced Landslide	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Ayudante	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Ayudante	Rain-induced Landslide	Urban Use Areas	1	3	3	0.50	3	1.50	4.50	Moderate
Bagani Camposanto	Rain-induced Landslide	Population	4	4	3	0.75	3	3.50	10.50	High
Bagani Camposanto	Rain-induced Landslide	Urban Use Areas	3	3	3	0.50	3	2.50	7.50	High
Bagani Gabor	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Bagani Gabor	Rain-induced Landslide	Urban Use Areas	1	3	3	0.50	3	1.50	4.50	Moderate
Bagani Tocgo	Rain-induced Landslide	Population	4	4	3	0.75	3	3.50	10.50	High
Bagani Tocgo	Rain-induced Landslide	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
Bagani Ubbog	Rain-induced Landslide	Population	1	4	3	0.75	3	2.00	6.00	Moderate
Bagani Ubbog	Rain-induced Landslide	Urban Use Areas	1	3	3	0.50	3	1.50	4.50	Moderate
Balingaoan	Rain-induced Landslide	Population	4	4	3	0.75	3	3.50	10.50	High
Balingaoan	Rain-induced Landslide	Urban Use Areas	3	4	3	0.75	3	3.00	9.00	High
Bugnay	Rain-induced Landslide	Population	4	4	3	0.75	3	3.50	10.50	High
Bugnay	Rain-induced Landslide	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
Caterman	Rain-induced Landslide	Population	4	4	3	0.75	3	3.50	10.50	High
Caterman	Rain-induced Landslide	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Cubcubbuot	Rain-induced Landslide	Population	4	4	3	0.75	3	3.50	10.50	High
Cubcubbuot	Rain-induced Landslide	Urban Use Areas	4	2	3	0.50	3	3.00	9.00	High
Palacapac	Rain-induced Landslide	Population	4	4	3	0.75	3	3.50	10.50	High
Palacapac	Rain-induced Landslide	Urban Use Areas	4	4	3	0.75	3	3.50	10.50	High
Parioc Primero	Rain-induced Landslide	Population	4	4	3	0.75	3	3.50	10.50	High
Parioc Primero	Rain-induced Landslide	Urban Use Areas	4	3	3	0.50	3	3.00	9.00	High
Parioc Segundo	Rain-induced Landslide	Population	2	4	3	0.75	3	2.50	7.50	High
Parioc Segundo	Rain-induced Landslide	Urban Use Areas	1	1	3	0.25	3	1.00	3.00	Moderate

Barangay	Hazard	Unit	E	S	AC	V	L	Sev	Risk	Category
Salvador Primero	Rain-induced Landslide	Population	4	4	3	0.75	3	3.50	10.50	High
Salvador Primero	Rain-induced Landslide	Urban Use Areas	3	3	3	0.50	3	2.50	7.50	High
Salvador Segundo	Rain-induced Landslide	Population	2	4	3	0.75	3	2.50	7.50	High
Salvador Segundo	Rain-induced Landslide	Urban Use Areas	1	4	3	0.75	3	2.00	6.00	Moderate
San Andres	Rain-induced Landslide	Population	4	4	3	0.75	3	3.50	10.50	High
San Andres	Rain-induced Landslide	Urban Use Areas	3	3	3	0.50	3	2.50	7.50	High
Santo Tomas	Rain-induced Landslide	Population	2	4	3	0.75	3	2.50	7.50	High
Santo Tomas	Rain-induced Landslide	Urban Use Areas	1	2	3	0.50	3	1.50	4.50	Moderate
Tablac	Rain-induced Landslide	Population	4	4	3	0.75	3	3.50	10.50	High
Tablac	Rain-induced Landslide	Urban Use Areas	3	2	3	0.50	3	2.50	7.50	High

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 Hall	Allangigan Primero	Flood	HF	-	-
Police Station	Allangigan Primero	Flood	HF	-	-
Municipal Health Centre	Allangigan Primero	Flood	HF	-	-
Fire Station	Allangigan Primero	Flood	HF	-	-
Central Elementary School	Allangigan Primero	Flood	HF	-	-
Covered Court Evacuation Centre	Allangigan Segundo	Flood	HF	-	-
Public Market	Allangigan Segundo	Flood	HF	-	-
District High School	Amguid	Flood	-	-	-
Barangay Health Station	Ayudante	Flood	LF	-	-
Water Pumping Station	Bagani Camposanto	Flood	-	-	-
Municipal Hall	Allangigan Primero	Liquefaction	Least Susceptible	-	-

Facility	Barangay	Hazard	Susceptibility	Risk	Category
Police Station	Allangigan Primero	Liquefaction	Least Susceptible	-	-
Municipal Health Centre	Allangigan Primero	Liquefaction	Least Susceptible	-	-
Fire Station	Allangigan Primero	Liquefaction	Least Susceptible	-	-
Central Elementary School	Allangigan Primero	Liquefaction	Least Susceptible	-	-
Public Market	Allangigan Segundo	Liquefaction	Least Susceptible	-	-
Covered Court Evacuation Centre	Allangigan Segundo	Liquefaction	Least Susceptible	-	-
District High School	Amguid	Liquefaction	-	-	-
Barangay Health Station	Ayudante	Liquefaction	Moderately Susceptible	-	-
Water Pumping Station	Bagani Camposanto	Liquefaction	-	-	-
Police Station	Allangigan Primero	Rain-induced Landslide	-	-	-
Municipal Health Centre	Allangigan Primero	Rain-induced Landslide	-	-	-
Fire Station	Allangigan Primero	Rain-induced Landslide	-	-	-
Central Elementary School	Allangigan Primero	Rain-induced Landslide	-	-	-
Municipal Hall	Allangigan Primero	Rain-induced Landslide	-	-	-
Public Market	Allangigan Segundo	Rain-induced Landslide	-	-	-
Covered Court Evacuation Centre	Allangigan Segundo	Rain-induced Landslide	-	-	-
District High School	Amguid	Rain-induced Landslide	ML	-	-
Barangay Health Station	Ayudante	Rain-induced Landslide	-	-	-
Water Pumping Station	Bagani Camposanto	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
Storm Surge	A hazard source	No automated source is wired up for this hazard yet.	Everything for this hazard
Sea Level Rise	A hazard source	No automated source is wired up for this hazard yet.	Everything for this hazard
Ground Shaking	Per-barangay susceptibility class, entered by the planner	The publishing agency will not serve this layer for computation, so susceptibility has to be entered per barangay by the planner.	Exposure, and therefore risk, for this hazard
Earthquake-induced Landslide	Per-barangay susceptibility class, entered by the planner	The publishing agency will not serve this layer for computation, so susceptibility has to be entered per barangay by the planner.	Exposure, and therefore risk, for this hazard
Ground Rupture	A hazard source	No automated source is wired up for this hazard yet.	Everything for this hazard
Tsunami	Per-barangay susceptibility class, entered by the planner	The publishing agency will not serve this layer for computation, so susceptibility has to be entered per barangay by the planner.	Exposure, and therefore risk, 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-json	PSAPs 2023-12-31 (PSA/NAMRIA via faeldon, MIT)	-	City outline, barangay polygons, all area computations
Tsunami Hazard	PHIVOLCS	DOST-PHIVOLCS	2026-09-03 08:53	Susceptibility class share per barangay
Earthquake-induced Landslide	PHIVOLCS	DOST-PHIVOLCS	2026-09-03 08:53	Susceptibility class share per barangay
Liquefaction Susceptibility	PHIVOLCS	DOST-PHIVOLCS (as of July 2018)	2026-09-03 08:53	Susceptibility class share per barangay
Rain-induced Landslide Susceptibility	DENR-MGB	DENR-Mines and Geosciences Bureau	2026-09-03 08:53	Susceptibility class share per barangay
Ground Shaking (Deterministic)	PHIVOLCS	DOST-PHIVOLCS	2026-09-03 08:53	Susceptibility class share per barangay
Flood Susceptibility	DENR-MGB	DENR-Mines and Geosciences Bureau	2026-09-03 08:53	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.
Severity of consequence	Exposure and vulnerability combined: $(\text{exposure} + \text{vulnerability}) / 2$.
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.