



**LANDSLIDE BULLETIN NO. 4  
FOR SHEAR LINE AND LPA TROUGH**

Issued on 21 December 2022 at 6:00 am  
Next Bulletin is on 21 December 2022 at 6:00 pm

**REFERENCE STATIONS AND AREAS OF  
INFLUENCE**

**SATELLITE RAINFALL FORECAST - ECMWF MODEL (mm)**

<b>Viga, Catanduanes (ARG)</b> Areas of Influence: <i>Panganiban, Caramoran, Viga, Baras, Gigmoto and San Miguel</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	3.7	3.9	5.0	10.0	9.0	8.0	8.0	16.0	63.6	293.8
December 20	8.0	17.0	7.0	10.0	6.0	7.0	7.0	2.0	64.0	357.8
December 21	0.4				5.0	0.3			5.7	363.5
December 22			0.5	4.0	4.3	1.8	4.0	7.0	21.6	385.1
December 23	12.0	8.0	9.0	7.0	8.0	9.0	13.0	9.0	75.0	460.1

**Landslides may start initiating on 20 December 2022.**

<b>Pandan, Catanduanes (AWS)</b> Areas of Influence: <i>Pandan and Bagamanoc</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	4.8	6.0	4.0	6.0	9.0	8.0	7.0	12.0	56.8	287.0
December 20	6.0	10.0	11.0	7.0	3.4	3.8	6.0	2.9	50.1	337.1
December 21		0.2	0.2	0.3	0.7	0.6	0.2	0.2	2.4	339.5
December 22	1.8	1.2	4.2	7.0	6.0	2.5	4.6	7.0	34.3	373.8
December 23	6.0	2.7	1.8	3.7	11.0	7.0	3.5	5.0	40.7	414.5

**Landslides may start initiating on 20 December 2022.**

<b>Virac, Catanduanes (ARG)</b> Areas of Influence: <i>Virac and Bato</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	1.8	1.5	2.0	6.0	8.0	7.0	7.0	16.0	49.3	279.5
December 20	7.0	10.0	2.4	7.0	8.0	6.0	6.0	1.9	48.3	327.8
December 21	0.2		0.2		4.2	0.3			4.9	332.7
December 22				1.4	3.4	0.4	0.7	1.0	6.9	339.6
December 23	2.4	1.0	2.0	1.4	3.8	2.4	9.0	6.0	28.0	367.6

**Landslides may start initiating on 20 December 2022.**

<b>San Andres, Catanduanes</b> Area of Influence: <i>San Andres</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	1.2	1.0	1.3	6.0	7.0	6.0	6.0	13.0	41.5	271.7
December 20	6.0	9.0	6.0	8.0	6.0	6.0	7.0	2.4	50.4	322.1
December 21				0.3	7.0	1.2			8.5	330.6
December 22	0.2	0.2	0.4	1.6	2.3	1.2	0.5	1.0	7.4	338.0
December 23	3.9	2.5	2.4	2.6	2.7	3.7	4.1	10.0	31.9	369.9

**Landslides may start initiating on 20 December 2022.**

<b>Siruma Camarines Sur (AWS)</b> Areas of Influence: <i>Garchitorena and Presentacion</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	7.0	5.0	9.0	4.2	8.0	8.0	9.0	9.0	59.2	293.4
December 20	8.0	3.6	9.0	6.0	2.6	2.1	0.8	2.3	34.4	327.8
December 21	1.6	0.3		1.0				0.5	3.4	331.2
December 22	0.8	2.3	1.9	0.5	0.2	0.8	0.5	2.0	9.0	340.2
December 23	1.4	3.5	6.0	7.0	4.4	1.9	2.2	1.9	28.3	368.5

**Landslides may start initiating on 20 December 2022.**

<b>Tinambac, Camarines Sur (AWS)</b> Areas of Influence: <i>Siruma, Tinambac, Naga City, Bombon, Calabanga and Magarao</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	2.2	1.2	1.3	4.6	4.8	8.0	6.0	8.0	36.1	270.3
December 20	4.5	2.1	2.2	4.5	2.6	1.3	0.3	0.6	18.1	288.4
December 21				0.4	1.0	0.8		0.2	2.4	290.8
December 22	0.5	1.7	5.0	3.0	1.7	2.2	2.5	2.8	19.4	310.2
December 23	3.7	6.0	7.0	6.0	3.2	2.5	2.3	3.0	33.7	343.9

**Landslides may start initiating on 19 December 2022.**

<b>Caramoan, Camarines Sur (AWS)</b> Areas of Influence: <i>Caramoan</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	6.0	4.2	2.3	11.0	9.0	8.0	7.0	10.0	57.5	291.7
December 20	6.0	5.0	7.0	9.0	3.7	3.5	2.5	2.6	39.3	331.0
December 21	0.3				1.5	0.8	0.2		2.8	333.8
December 22	0.6	0.6	1.9	6.0	3.6	2.8	3.7	7.0	26.2	360.0
December 23	9.0	7.0	3.8	1.7	1.2	6.0	2.4	2.1	33.2	393.2

**Landslides may start initiating on 19 December 2022.**

<b>Iriga City, Camarines Sur (AWS)</b> Areas of Influence: <i>Ocampo, Baa, Iriga City, Buhí and Sagñay</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	1.6	1.5	1.4	9.0	3.1	2.1	4.6	7.0	28.8	219.8
December 20	8.0	5.0	3.6	2.5	2.2	0.6			21.9	241.7
December 21	0.5				0.6	0.6			1.7	243.4
December 22				1.0	0.3	0.4		1.5	3.2	246.6
December 23	8.0	2.2	2.5	2.2	1.2	1.1	1.7	1.0	19.9	266.5


**Accumulated ground rainfall and forecast satellite rainfall may trigger landslides.**

<b>Ragay, Camarines Sur (AWS)</b> Areas of Influence: <i>Del Gallego, Ragay, Lupi and Sipocot</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	0.9	0.6	0.6	3.4	2.4	6.0	7.0	7.0	27.9	233.5
December 20	4.8	0.9	2.1	3.2	0.8	0.2	0.4		12.4	245.9
December 21					0.6	0.5			1.1	247.0
December 22		1.7	0.7	0.2			0.3	0.4	3.3	250.3

December 23	0.6	0.5	0.8	0.7	0.3	0.4	1.0	10.0	14.3	264.6
<b>Landslides may start initiating on 20 December 2022.</b>										
<b>Pasacao, Camarines Sur (AWS)</b>										
Areas of Influence: <i>Libmanan, Pasacao, Gainza, Pamplona, San Fernando, Camaligan, Canaman and San Pascual</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19				8.0	2.3	2.0	2.6	3.0	17.9	223.5
December 20	3.4	2.6	0.8	0.6	1.3	0.7			9.4	232.9
December 21	0.2			0.2	0.7	0.3			1.4	234.3
December 22			0.7	0.2			0.2	0.2	1.3	235.6
December 23	0.5	1.4	1.0	0.3	0.3	0.4	0.5	4.7	9.1	244.7
<b>Landslides may start initiating on 20 December 2022.</b>										
<b>Bula, Camarines Sur (AWS)</b>										
Areas of Influence: <i>Milaor, Minalabac, Bula, Piji, Nabua and Balatan</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	0.5	0.5	0.4	11.0	2.7	2.1	2.5	7.0	26.7	232.3
December 20	6.0	3.1	2.8	1.3	1.4	0.5			15.1	247.4
December 21	0.4	0.2			8.0	1.2			9.8	257.2
December 22				0.6	0.7	0.3			1.6	258.8
December 23	1.7	1.9	0.4	1.1	0.9	0.9	1.1	0.7	8.7	267.5
<b>Landslides may start initiating on 20 December 2022.</b>										
<b>San Jose, Camarines Sur (AWS)</b>										
Areas of Influence: <i>Goa, Tigaon, San Jose and Laqonoy</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	1.9	0.8	0.6	7.0	4.5	6.0	4.1	7.0	31.9	266.1
December 20	4.5	3.4	3.0	8.0	3.4	2.0	0.5	0.6	25.4	291.5
December 21	0.7				2.1	1.0			3.8	295.3
December 22			2.8	3.8	1.8	1.9	1.6	4.0	15.9	311.2
December 23	7.0	7.0	3.5	2.3	1.3	1.2	1.4	1.2	24.9	336.1
<b>Landslides may start initiating on 19 December 2022.</b>										
<b>Labo, Camarines Norte (AWS)</b>										
Areas of Influence: <i>Labo, Paracale and Vinzons</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	7.0	6.0	4.6	9.0	7.0	11.0	9.0	10.0	63.6	464.0
December 20	11.0	7.0	4.6	4.8	1.4	1.0	0.3	0.8	30.9	494.9
December 21	1.6		0.4	0.5	1.0	1.3	0.2	0.8	5.8	500.7
December 22	1.6	6.0	1.4	0.6	0.5	1.7	1.9	3.1	16.8	517.5
December 23	3.9	5.0	6.0	5.0	4.3	3.7	2.0	3.4	33.3	550.8
<b>Landslides may start initiating on 19 December 2022.</b>										
<b>Jose Panganiban, Camarines Norte (AWS)</b>										
Areas of Influence: <i>Jose Panganiban, Sta. Elena and Capalonga</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	6.0	5.0	3.5	7.0	6.0	10.0	6.0	10.0	53.5	453.9
December 20	9.0	7.0	4.9	3.0	0.6	0.8	0.4	1.3	27.0	480.9
December 21	1.4	0.4	0.2	0.3	0.6	0.2	0.3	1.8	5.2	486.1
December 22	1.9	1.7	0.5	0.4	0.2	1.2	1.1	1.1	8.1	494.2
December 23	1.1	1.2	0.5	2.6	3.4	2.7		0.3	11.8	506.0
<b>Landslides may start initiating on 19 December 2022.</b>										
<b>Tulay na Lupa, Labo, Camarines Norte (ARG)</b>										
Areas of Influence: <i>San Vicente and San Lorenzo Ruiz</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	8.0	9.0	9.0	13.0	9.0	12.0	12.0	11.0	83.0	483.4
December 20	14.0	10.0	6.0	5.0	1.6	1.6	0.5	0.5	39.2	522.6
December 21	0.9		0.2	0.6	1.6	2.9	0.2	1.0	7.4	530.0
December 22	1.3	8.0	1.2	0.8	1.2	2.2	2.5	3.9	21.1	551.1
December 23	6.0	6.0	8.0	7.0	4.8	3.8	2.5	5.0	43.1	594.2
<b>Landslides may start initiating on 19 December 2022.</b>										
<b>Daet, Camarines Norte (ARG)</b>										
Areas of Influence: <i>Daet, Mercedes, Basud and Talisay</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	8.0	10.0	10.0	12.0	9.0	10.0	13.0	9.0	81.0	481.4
December 20	11.0	9.0	7.0	7.0	2.1	2.1	0.8	0.9	39.9	521.3
December 21	2.2		0.4	0.5	0.3	0.5	0.3	1.2	5.4	526.7
December 22	1.4	6.0	3.3	0.5	0.2	2.4	2.1	2.8	18.7	545.4
December 23	2.8	6.0	6.0	7.0	5.0	4.5	2.5	4.0	37.8	583.2
<b>Landslides may start initiating on 19 December 2022.</b>										
<b>Rapu-Rapu, Albay (AWS)</b>										
Areas of Influence: <i>Rapu-Rapu and Prieto Diaz (Sorsogon)</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19									0.0	278.5
December 20				7.0	5.0	4.4	4.4	0.8	21.6	300.1
December 21	0.6	2.3	1.7			0.5	2.2	0.6	7.9	308.0
December 22	1.2	0.9	3.1	1.3	1.3	1.7	6.0	3.3	18.8	326.8
December 23	13.0	2.1	3.2	2.2	1.0	7.0	4.2	13.0	45.7	372.5
<b>Landslides may start initiating on 20 December 2022.</b>										
<b>Matnog, Sorsogon (ARG)</b>										
Areas of Influence: <i>Irosin, Matnog and Bulan</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	1.4	1.0	1.4	6.0	5.0	4.6	4.9	6.0	30.3	213.1
December 20	7.0	1.7		3.9	1.3	0.3	0.8	0.5	15.5	228.6
December 21	0.4	0.2			1.4	0.7			2.7	231.3
December 22				0.3	3.0	0.7			4.0	235.3
December 23	0.2	0.8	2.2	7.0	22.0	20.0	12.0	12.0	76.2	311.5
<b>Accumulated ground rainfall and forecast satellite rainfall may trigger landslides.</b>										
<b>Barcelona, Sorsogon (AWS)</b>										
Areas of Influence: <i>Gubat, Casiguran and Barcelona</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	9.0	3.3	3.2	13.0	7.0	11.0	13.0	9.0	68.5	251.3
December 20	10.0	4.8	0.3	3.2	6.0	2.4	4.3	0.8	31.8	283.1
December 21	1.2	1.9	0.6	0.9	0.2	0.6	0.6	0.5	6.5	289.6
December 22	0.6	0.7	2.1	1.1	1.7	0.9	1.8	3.6	12.5	302.1
December 23	1.1	6.0	5.0	13.0	13.0	27.0	8.0	24.0	97.1	399.2
<b>Accumulated ground rainfall and forecast satellite rainfall may trigger landslides.</b>										

<b>Castilla, Sorsogon (AWS)</b> Areas of Influence: <i>Pilar, Castilla, Sorsogon City, Magallanes and Manito (Albay)</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	1.6	1.7	1.1	10.0	5.0	9.0	11.0	12.0	51.4	234.2
December 20	6.0	2.3		5.0	2.6	4.4	1.3	0.2	21.8	256.0
December 21	0.3					3.0	0.3		3.6	259.6
December 22				0.9	1.7	1.0	1.1	0.7	5.4	265.0
December 23	1.1	1.7	1.1	3.1	4.4	6.0	4.7	4.0	26.1	291.1
<b>Accumulated ground rainfall and forecast satellite rainfall may trigger landslides.</b>										
<b>Bulusan, Sorsogon (ARG)</b> Areas of Influence: <i>Bulusan, Juban and Sta. Magdalena</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	3.0	2.8	2.4	0.7	2.1	2.9	6.0	5.0	24.9	207.7
December 20	8.0	3.8	0.2	3.7	4.3	1.2	2.4	1.1	24.7	232.4
December 21	0.9	0.8	0.4	0.3	0.6	0.5	0.3	0.3	4.1	236.5
December 22	0.2	0.2	0.3	0.7	1.3	0.7	0.6	0.8	4.8	241.3
December 23	0.7	3.5	6.0	11.0	23.0	21.0	13.0	23.0	101.2	342.5
<b>Accumulated ground rainfall and forecast satellite rainfall may trigger landslides.</b>										
<b>Masbate City, Masbate (AWS)</b> Areas of Influence: <i>Masbate City, Mobo, Uson, Cawayan, San Jacinto, San Fernando, Batuan, Placer Dimasalang, Palanas, Pio V. Corpuz, Cataingan and Esperanza</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	0.3	0.2	0.3	0.7	2.1	2.9	6.0	5.0	17.5	77.3
December 20	0.8	0.6		0.3	0.4		0.3	0.5	2.9	80.2
December 21	0.3			0.2	0.2	0.4	0.2		1.3	81.5
December 22				1.1	1.0	1.0	0.6	0.2	3.9	85.4
December 23	0.2	0.2	0.6	1.9	1.5	12.0	30.0	13.0	59.4	144.8
<b>Accumulated ground rainfall and forecast satellite rainfall may trigger landslides.</b>										
<b>Mandaon, Masbate (AWS)</b> Areas of Influence: <i>Mandaon, Milagros and Balud</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	0.2			0.6	2.2	1.9	4.8	3.1	12.8	72.6
December 20	0.5			0.2	0.5				1.2	73.8
December 21	0.2	0.3			1.8	2.4	0.9		5.6	79.4
December 22				0.9	2.6	1.5	0.3		5.3	84.7
December 23			0.7	1.6	2.1	20.0	15.0	19.0	58.4	143.1
<b>Accumulated ground rainfall and forecast satellite rainfall may trigger landslides.</b>										
<b>Aroroy, Masbate (ARG)</b> Areas of Influence: <i>Aroroy, Baleno, Claveria and Monreal</i>	2am PST	5am PST	8am PST	11am PST	2pm PST	5pm PST	8pm PST	11pm PST	Daily Total	Accumulated
December 19	1.7	0.5	0.7	0.5	2.1	1.7	7.0	7.0	21.2	81.0
December 20	1.8	1.3		0.3	1.0	0.4	0.7	0.4	5.9	86.9
December 21	1.0		0.5			0.3			1.8	88.7
December 22	0.5	0.6	0.3	0.3	1.3	3.2	1.1	0.3	7.6	96.3
December 23	0.3	0.7	2.8	2.5	4.8	11.0	17.0	9.0	48.1	144.4
<b>Accumulated ground rainfall and forecast satellite rainfall may trigger landslides.</b>										
Communities and the Local Disaster Risk and Reduction Management Councils are advised to take the necessary precautionary measures and watch for the next bulletin.										

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