**Table S1.** Causatives factors used in susceptibility modeling and their significance.

| Conditioning Factors | | Significance | References |
|---|---|---|---|
| **Seismic Factors** | PGA | Co-seismic landslide abundances generally increase with PGA values. | Weng, et al. 2011; Regmi, et al. 2016; Saputra 2016; Kritikos, et al. 2015 |
| | Epicenter proximity | The intensity of the earthquake decreases as the distance from the epicenter increases. | Regmi, et al. 2016; Delgado, et al. 2011 |
| | Fault proximity | Co-seismic landslides were fully controlled by faults in various earthquakes. | Regmi, et al 2010; Kritikos, et al 2015; Lee and Evangelista 2006; Wang 2015; Kamp, et al. 2008 |
| **Geologic Factor** | Geology | Geological parameters greatly influence the occurrence of landslides since different lithological units have varying physical properties | Regmi, et al 2010; Wang 2015; Kamp, et al. 2008; Regmi, et al. 2016; Pradhan and Lee 2014 |
| **Topographic Factors** | Elevation | The influence of gravity is greater at higher elevation and causes more landslides. | Wang 2015; Kamp, et al. 2008; Regmi, et al. 2016; Regmi, et al. 2010; Pradhan and Lee 2014 |
| | Slope | If the slope is great, there is an increased chance of landslide occurrence. | Wang 2015; Kamp, et al. 2008; Regmi, et al. 2016; Regmi, et al. 2010; Pradhan and Lee 2014 |
| | Internal relief | Internal relief corresponds to the maximum relief differences within a unit area which indicates the energy for mass wasting | Pradhan and Lee 2014; Ghimire 2011 |
| | Plan curvature | Curvature depends on converging, diverging flow, soil water content, and soil characteristics. | Wang 2015; Regmi, et al. 2016; Regmi, et al. 2010; Pradhan and Lee 2014 |
| **Hydrologic Factors** | Drainage proximity | The streams adversely affect stability by eroding the slope. | Wang 2015; Kamp, et al. 2008; Regmi, et al. 2016; Pradhan and Lee 2014 |
| | Sediment transport index | The slope and length (LS) factor is an amount of the sediment transport capacity in the universal soil loss equation. | Regmi, et al. 2010; Pradhan and Lee 2014 |
| | Topographic wetness index (TWI) | TWI is a steady state wetness index and it is commonly used to quantify topographic control on hydrological processes | Wang 2015; Regmi, et al. 2010; Pradhan and Lee 2014 |

**Table S2.** Spatial relationships between seismic factors and landslide distribution.

| Factor | Class | No. of Landslides | % of Landslides | No of Pixels in Domain | % of Pixels in Domain | Frequency Ratio (FR) | Evidence Belief Function (EBF (*Bel*)) | Weight of Evidence (WOE) (Weight Contrast) |
|---|---|---|---|---|---|---|---|---|
| **PGA** | <0.24 | 0 | 0 | 1065 | 0.04 | 0.00 | 0.00 | 0.00 |
| | 0.24–0.28 | 318 | 20.70 | 1,002,334 | 36.25 | 0.57 | 0.06 | −0.78 |
| | 0.28–0.36 | 656 | 42.71 | 803,576 | 29.06 | 1.47 | 0.24 | 0.60 |
| | 0.36–0.44 | 92 | 5.99 | 114,549 | 4.14 | 1.45 | 0.19 | 0.39 |
| | 0.44–0.52 | 92 | 5.99 | 130,799 | 4.73 | 1.27 | 0.17 | 0.25 |
| | 0.52–0.60 | 208 | 13.54 | 301,963 | 10.92 | 1.24 | 0.17 | 0.25 |
| | 0.60–0.68 | 46 | 2.99 | 123,575 | 4.47 | 0.67 | 0.09 | −0.42 |
| | >0.68 | 124 | 8.07 | 287,568 | 10.40 | 0.78 | 0.10 | −0.28 |
| **Epicenter Proximity (m)** | <2000 | 849 | 55.27 | 1,014,864 | 36.70 | 1.51 | 0.52 | 0.35 |
| | 2000–4000 | 376 | 24.48 | 802,629 | 29.02 | 0.84 | 0.19 | −0.23 |
| | 4000–6000 | 232 | 15.10 | 545,903 | 19.74 | 0.77 | 0.18 | −0.32 |
| | 6000–10000 | 77 | 5.01 | 294,359 | 10.64 | 0.47 | 0.11 | −0.81 |
| | >10000 | 2 | 0.13 | 107,674 | 3.89 | 0.03 | 0.01 | −3.44 |
| **Fault Proximity (km)** | <2.5 | 951 | 61.91 | 972,799 | 35.18 | 1.76 | 0.46 | 0.53 |
| | 2.4–6.1 | 195 | 12.70 | 492,175 | 17.80 | 0.71 | 0.10 | −0.06 |
| | 6.1–10 | 118 | 7.68 | 361,607 | 13.08 | 0.59 | 0.09 | −0.59 |
| | 10–14.3 | 89 | 5.79 | 231,644 | 8.38 | 0.69 | 0.10 | −0.40 |
| | 14.3–18.8 | 113 | 7.36 | 213,343 | 7.71 | 0.95 | 0.15 | −0.05 |
| | 18.8–22.9 | 59 | 3.84 | 195,961 | 7.09 | 0.54 | 0.08 | −0.65 |
| | 22.9–27.1 | 9 | 0.59 | 190,852 | 6.90 | 0.08 | 0.01 | −2.53 |
| | >27.1 | 2 | 0.13 | 107,048 | 3.87 | 0.03 | 0.00 | −3.43 |

**Table S3.** Spatial relationships between geology factor classes and landslide distribution.

| Factor | Class | No. of Landslides | % of Landslides | No. of Pixels in Domain | % of Pixels in Domain | Frequency Ratio (FR) | Evidence Belief Function (EBF (*Bel*)) | Weight of Evidence (WOE) (Weight Contrast) |
|---|---|---|---|---|---|---|---|---|
| **Geology** | Tgr | 0 | 0.00 | 36,069 | 1.30 | 0.00 | 0.00 | −0.01 |
| | Ta | 631 | 41.08 | 1,546,718 | 55.93 | 0.73 | 0.03 | −0.29 |
| | Gn | 101 | 6.58 | 156,448 | 5.66 | 1.16 | 0.06 | 0.16 |
| | Rm | 22 | 1.43 | 15,993 | 0.58 | 2.48 | 0.13 | 0.01 |
| | Ks | 13 | 0.85 | 10,334 | 0.37 | 2.26 | 0.11 | 0.82 |
| | Dk | 67 | 4.36 | 99,703 | 3.61 | 1.21 | 0.06 | 0.01 |
| | Ul | 67 | 4.36 | 57,114 | 2.07 | 2.11 | 0.11 | 0.02 |
| | Lk | 123 | 8.01 | 90,687 | 3.28 | 2.44 | 0.13 | 0.94 |
| | Gl | 134 | 8.72 | 99,156 | 3.59 | 2.43 | 0.13 | 0.05 |
| | Sg | 100 | 6.51 | 60,769 | 2.20 | 2.96 | 0.16 | 0.05 |
| | Gp | 102 | 6.64 | 82,132 | 2.97 | 2.24 | 0.12 | 0.84 |
| | Nd | 59 | 3.84 | 43,166 | 1.56 | 2.46 | 0.13 | 0.02 |
| | St | 117 | 7.62 | 467,140 | 16.89 | 0.45 | 0.02 | −0.11 |

**Table S4.** Spatial relationships between topographic factors and landslide distribution.

| Factor | Class | No. of Landslides | % of Landslides | No. of Pixels in Domain | % of Pixels in Domain | Frequency Ratio (FR) | Evidence Belief Function (EBF (*Bel*)) | Weight of Evidence (WOE) (Weight Contrast) |
|---|---|---|---|---|---|---|---|---|
| **Elevation (m)** | <1281 | 164 | 10.68 | 436,071 | 15.77 | 0.68 | 0.09 | −0.45 |
| | 1281–1755 | 424 | 27.60 | 494,146 | 17.87 | 1.54 | 0.23 | 0.56 |
| | 1755–2254 | 497 | 32.36 | 470,486 | 17.01 | 1.90 | 0.31 | 0.85 |
| | 2254–3302 | 238 | 15.49 | 348,370 | 12.60 | 1.23 | 0.17 | 0.24 |
| | 3302–3850 | 128 | 8.33 | 283,760 | 10.26 | 0.81 | 0.11 | −0.23 |
| | 3850–4424 | 74 | 4.82 | 213,841 | 7.73 | 0.62 | 0.08 | −0.50 |
| | 4424–4973 | 10 | 0.65 | 202,415 | 7.32 | 0.09 | 0.01 | −2.49 |
| | 4973–5621 | 1 | 0.07 | 167,396 | 6.05 | 0.01 | 0.00 | −4.59 |
| | 5621–6968 | 0 | 0.00 | 118,901 | 4.30 | 0.00 | 0.00 | −0.04 |
| | >6968 | 0 | 0.00 | 30,043 | 1.09 | 0.00 | 0.00 | 0.00 |
| **Slope (deg)** | 0–16 | 89 | 5.79 | 334,092 | 12.08 | 0.48 | 0.03 | −0.80 |
| | 16–26.5 | 304 | 19.79 | 756,617 | 27.36 | 0.72 | 0.04 | −0.42 |
| | 26.5–35.9 | 451 | 29.36 | 841,966 | 30.45 | 0.96 | 0.06 | −0.05 |
| | 35.9–45.8 | 463 | 30.14 | 583,819 | 9.00 | 3.35 | 0.13 | 1.47 |
| | >45.8 | 229 | 14.91 | 248,935 | 100.00 | 0.15 | 0.24 | −1.90 |
| **Curvature** | <−10 (Concave) | 66 | 4.30 | 120,915 | 4.37 | 0.98 | 0.33 | −0.02 |
| | 0.5 (Plan) | 766 | 49.87 | 1,404,997 | 50.81 | 0.98 | 0.32 | −0.04 |
| | >0.5 (Convex) | 704 | 45.83 | 1,239,517 | 44.82 | 1.02 | 0.35 | 0.04 |
| **Internal Relief (m)** | <47 | 163 | 10.61 | 606,345 | 21.93 | 0.48 | 0.07 | −0.86 |
| | 47–74 | 439 | 28.58 | 945,153 | 34.18 | 0.84 | 0.13 | −0.08 |
| | 74–104.7 | 561 | 36.52 | 793,797 | 28.70 | 1.27 | 0.25 | 0.12 |
| | 14.75–149.8 | 312 | 20.31 | 340,412 | 12.31 | 1.65 | 0.31 | 0.10 |
| | >149.8 | 61 | 3.97 | 79,722 | 2.88 | 1.38 | 0.24 | 0.01 |

**Table S5.** Spatial relationships between hydrologic factors and landslide distribution.

| Factor | Class | No. of Landslides | % of Landslides | No. of Pixels in Domain | % of Pixels in Domain | Frequency Ratio (FR) | Evidence Belief Function (EBF (*Bel*)) | Weight of Evidence (WOE) (Weight Contrast) |
|---|---|---|---|---|---|---|---|---|
| **Drainage Proximity (m)** | <50 | 479 | 31.18 | 708,884 | 25.63 | 1.22 | 0.23 | 0.08 |
| | 50–100 | 349 | 22.72 | 588,429 | 21.28 | 1.07 | 0.19 | 0.08 |
| | 100–200 | 389 | 25.33 | 603,505 | 21.82 | 1.16 | 0.21 | 0.19 |
| | 200–400 | 239 | 15.56 | 445,450 | 16.11 | 0.97 | 0.17 | −0.04 |
| | 400–600 | 63 | 4.10 | 141,142 | 5.10 | 0.80 | 0.14 | −0.23 |
| | 600–800 | 13 | 0.85 | 158,326 | 5.73 | 0.15 | 0.02 | −1.96 |
| | 800–1000 | 4 | 0.26 | 30,020 | 1.09 | 0.24 | 0.04 | −1.44 |
| | >1000 | 0 | 0.00 | 89,673 | 3.24 | 0.00 | 0.00 | −0.03 |
| **STI** | <7.1 | 196 | 12.76 | 650,419 | 23.52 | 0.54 | 0.08 | −0.74 |
| | 7.1–12.3 | 487 | 31.71 | 1,013,287 | 36.64 | 0.87 | 0.13 | −0.22 |
| | 12.3–18.1 | 572 | 37.24 | 794,634 | 28.73 | 1.30 | 0.24 | 0.39 |
| | 18.1–28.2 | 246 | 16.02 | 276,379 | 9.99 | 1.60 | 0.28 | 0.54 |
| | >28.2 | 35 | 2.28 | 30,710 | 1.11 | 2.05 | 0.34 | 0.73 |
| **TWI** | <5 | 614 | 39.97 | 1,000,685 | 36.19 | 1.10 | 0.61 | 0.14 |
| | 5–6.9 | 593 | 38.61 | 1,094,034 | 39.56 | 0.98 | 0.16 | −0.33 |
| | 6.9–9.4 | 248 | 16.15 | 510,888 | 18.47 | 0.87 | 0.10 | −0.30 |
| | 9.4–13.9 | 63 | 4.10 | 129,862 | 4.70 | 0.87 | 0.13 | −0.17 |
| | >13.9 | 18 | 1.17 | 29,960 | 1.08 | 1.08 | 0.00 | 0.00 |