**Supplementary Table 1.** Wave height at shore values based on vertical run-up measurements.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Latitude1** | **Longitude1** | **Locality1** | **Vertical run-up1(m)** | **Wave height at shore2 (m)** | **Corresponding shoreline section (SS)3** |
| 13.41393  | 121.0479 | Lumangbayan, San Teodoro | 3.82 | 2.85 | 1 |
| 13.40750 | 121.0711 | Tacligan, San Teodoro | 1.65 | 1.33 | 4 |
| 13.41877 | 121.0944 | Pulangtubig, Baco | 1.22 | 1.08 | 6 |
| 13.41253 | 121.1247 | San Andres, Baco | 4.06 | 7.61 | 9 |
| 13.41010 | 121.1328 | Pambisan, Calapan | 2.99 | 4.17 | 10 |
| 13.40883 | 121.1443 | Wawa, Calapan | 2.78 | 3.24 | 12 |
| 13.41736 | 121.1838 | Calero, Calapan | 3.14 | 2.84 | 16 |
| 13.42847 | 121.1947 | San Antonio, Calapan | 3.35 | 2.60 | 17 |
| 13.46436 | 121.1571 | Baco Islands (SW) | 7.29 | 5.32 | 20 |
| 13.46942 | 121.1593 | Baco Islands (N) | 6.14 | 4.49 | 21 |

1From Imamura and others (1995)
2 Calculated using equations relating wave height at shore and run-up by Smart and other (2016)
3 Shoreline sections for sampling modeled wave heights at shore as shown in

**Supplementary Table 2.** Modeled wave height (m) statistics

|  |
| --- |
| **EQ-only** |
| **Shoreline Section (SS)** | **Mean** | **Minimum** | **1st Quartile** | **Median** | **3rd Quartile** | **Maximum** | **Range** | **Standard deviation** |
| 1 | 1.674 | 0.815 | 1.280 | 1.607 | 1.989 | 3.206 | 2.391 | 0.539 |
| 2 | 0.612 | 0.405 | 0.501 | 0.583 | 0.726 | 0.853 | 0.448 | 0.129 |
| 3 | 0.604 | 0.461 | 0.527 | 0.591 | 0.659 | 0.872 | 0.411 | 0.102 |
| 4 | 0.498 | 0.367 | 0.408 | 0.457 | 0.543 | 1.091 | 0.724 | 0.138 |
| 5 | 0.604 | 0.379 | 0.456 | 0.528 | 0.668 | 1.531 | 1.152 | 0.241 |
| 6 | 0.495 | 0.330 | 0.369 | 0.481 | 0.582 | 0.806 | 0.476 | 0.137 |
| 7 | 0.636 | 0.402 | 0.560 | 0.647 | 0.694 | 0.855 | 0.452 | 0.104 |
| 8 | 0.633 | 0.347 | 0.509 | 0.581 | 0.747 | 1.246 | 0.900 | 0.200 |
| 9 | 0.626 | 0.404 | 0.559 | 0.628 | 0.702 | 0.871 | 0.467 | 0.116 |
| 10 | 0.609 | 0.464 | 0.555 | 0.611 | 0.641 | 0.809 | 0.345 | 0.077 |
| 11 | 0.914 | 0.413 | 0.598 | 0.757 | 1.088 | 2.430 | 2.017 | 0.465 |
| 12 | 0.887 | 0.213 | 0.386 | 0.741 | 1.280 | 2.174 | 1.961 | 0.574 |
| 13 | 0.590 | 0.364 | 0.444 | 0.553 | 0.683 | 1.340 | 0.976 | 0.208 |
| 14 | 0.646 | 0.394 | 0.453 | 0.591 | 0.731 | 1.364 | 0.970 | 0.233 |
| 15 | 0.771 | 0.458 | 0.626 | 0.758 | 0.870 | 1.217 | 0.759 | 0.189 |
| 16 | 0.996 | 0.504 | 0.729 | 0.977 | 1.257 | 2.106 | 1.601 | 0.348 |
| 17 | 0.621 | 0.294 | 0.532 | 0.623 | 0.712 | 1.129 | 0.835 | 0.172 |
| 18 | 1.448 | 0.828 | 1.107 | 1.555 | 1.685 | 2.149 | 1.321 | 0.347 |
| 19 | 1.543 | 0.795 | 1.112 | 1.360 | 1.843 | 3.303 | 2.508 | 0.603 |
| 20 | 0.720 | 0.492 | 0.622 | 0.689 | 0.779 | 1.253 | 0.762 | 0.148 |
| 21 | 0.885 | 0.394 | 0.560 | 0.850 | 1.105 | 2.188 | 1.795 | 0.374 |
| 22 | 0.682 | 0.395 | 0.491 | 0.580 | 0.847 | 1.436 | 1.042 | 0.271 |
| **EQ+SMF** |
| **Shoreline Section (SS)** | **Mean** | **Minimum** | **1st Quartile** | **Median** | **3rd Quartile** | **Maximum** | **Range** | **Standard deviation** |
| 1 | 3.039898 | 1.267478 | 2.410094 | 2.798338 | 3.451215 | 6.043455 | 4.775977 | 1.087527 |
| 2 | 0.839096 | 0.568499 | 0.684987 | 0.762333 | 0.978643 | 1.646624 | 1.078125 | 0.236894 |
| 3 | 0.967934 | 0.469024 | 0.802443 | 0.964044 | 1.073577 | 1.556485 | 1.087461 | 0.247098 |
| 4 | 0.859016 | 0.53882 | 0.696566 | 0.871628 | 0.987902 | 1.353941 | 0.815121 | 0.200279 |
| 5 | 1.215965 | 0.658369 | 1.029189 | 1.134295 | 1.451431 | 2.112372 | 1.454003 | 0.322001 |
| 6 | 0.981298 | 0.560166 | 0.76922 | 0.884199 | 1.176306 | 1.847821 | 1.287655 | 0.295619 |
| 7 | 2.3878 | 1.284756 | 1.597558 | 2.038664 | 3.329755 | 4.560071 | 3.275315 | 0.942184 |
| 8 | 5.105683 | 2.701057 | 4.073105 | 4.940606 | 6.368532 | 7.931718 | 5.230661 | 1.461541 |
| 9 | 11.34368 | 4.781098 | 8.109563 | 9.782905 | 14.65009 | 22.02879 | 17.24769 | 4.686455 |
| 10 | 3.56474 | 2.64736 | 2.81747 | 3.300348 | 3.757119 | 7.854315 | 5.206955 | 1.054152 |
| 11 | 3.517108 | 1.722631 | 2.423933 | 3.399185 | 4.460927 | 6.177581 | 4.45495 | 1.249886 |
| 12 | 1.920304 | 0.92402 | 1.241455 | 1.656305 | 2.54994 | 3.935025 | 3.011005 | 0.829401 |
| 13 | 0.782967 | 0.497072 | 0.625854 | 0.688715 | 0.982314 | 1.76776 | 1.270688 | 0.279489 |
| 14 | 1.250565 | 0.760527 | 0.941318 | 1.061365 | 1.358833 | 2.726574 | 1.966047 | 0.458643 |
| 15 | 1.007259 | 0.64386 | 0.835943 | 0.961806 | 1.138405 | 1.661656 | 1.017796 | 0.239127 |
| 16 | 1.486871 | 0.811993 | 1.102818 | 1.333752 | 1.755447 | 2.991034 | 2.179041 | 0.492923 |
| 17 | 1.428012 | 0.712185 | 1.150506 | 1.373448 | 1.646206 | 4.151838 | 3.439653 | 0.628055 |
| 18 | 1.98099 | 1.014151 | 1.571613 | 1.91058 | 2.368025 | 3.130588 | 2.116437 | 0.542454 |
| 19 | 1.927769 | 1.054993 | 1.535194 | 1.898943 | 2.228537 | 3.478042 | 2.423049 | 0.600703 |
| 20 | 2.294768 | 1.355731 | 1.796155 | 2.000078 | 2.500645 | 5.368845 | 4.013114 | 0.880872 |
| 21 | 2.558601 | 1.134192 | 1.650724 | 2.286301 | 2.862048 | 5.832218 | 4.698026 | 1.265169 |
| 22 | 1.348494 | 0.61778 | 1.007153 | 1.222807 | 1.56477 | 3.051241 | 2.433461 | 0.506087 |