**APPENDIX 3**

**Estimated population and extinction probability from four scenarios: Pdeath\_corvid = 0, 0.23, 0.45, and 0.55. Mean and standard deviation of estimates are taken over 1000 simulated population over 50 years (with survival probability = 0.78, *P*breeder = 0.65, initial population = 71).**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Predicted year** | ***P*death\_corvid = 0** | | ***P*death\_corvid = 0.25** | | ***P*death\_corvid = 0.45** | | ***P*death\_corvid = 0.55** | |
| *N*j (mean ± sd) | Ext. | *N*j (mean ± sd) | Ext. | *N*j (mean ± sd) | Ext. | *N*j (mean ± sd) | Ext. |
| 2023 | 95.77 ± 5.69 | 0.00 | 79.42 ± 6.05 | 0.00 | 63.37 ± 6.12 | 0.00 | 56.69 ± 6.03 | 0.00 |
| 2024 | 100.02 ± 8.02 | 0.00 | 70.38 ± 7.59 | 0.00 | 45.86 ± 6.67 | 0.00 | 36.43 ± 6.03 | 0.00 |
| 2025 | 104.05 ± 9.63 | 0.00 | 62.76 ± 8.48 | 0.00 | 33.36 ± 6.28 | 0.00 | 23.88 ± 5.41 | 0.00 |
| 2026 | 107.83 ± 10.48 | 0.00 | 56.25 ± 8.91 | 0.00 | 24.61 ± 5.87 | 0.00 | 15.70 ± 4.62 | 0.00 |
| 2027 | 111.21 ± 11.16 | 0.00 | 50.66 ± 8.94 | 0.00 | 18.19 ± 5.25 | 0.00 | 10.47 ± 4.06 | 0.00 |
| 2028 | 113.98 ± 11.92 | 0.00 | 46.01 ± 9.26 | 0.00 | 13.59 ± 4.96 | 0.00 | 6.93 ± 3.46 | 0.01 |
| 2029 | 116.69 ± 12.27 | 0.00 | 41.93 ± 9.40 | 0.00 | 10.29 ± 4.56 | 0.00 | 4.66 ± 2.86 | 0.04 |
| 2030 | 119.10 ± 12.61 | 0.00 | 38.41 ± 9.16 | 0.00 | 7.71 ± 4.01 | 0.01 | 3.15 ± 2.35 | 0.10 |
| 2031 | 121.12 ± 12.68 | 0.00 | 35.49 ± 8.82 | 0.00 | 5.91 ± 3.65 | 0.03 | 2.17 ± 1.97 | 0.24 |
| 2032 | 122.94 ± 12.63 | 0.00 | 32.58 ± 8.64 | 0.00 | 4.53 ± 3.17 | 0.06 | 1.50 ± 1.64 | 0.36 |
| 2033 | 124.45 ± 12.27 | 0.00 | 30.09 ± 8.45 | 0.00 | 3.48 ± 2.80 | 0.12 | 1.12 ± 1.38 | 0.46 |
| 2034 | 126.27 ± 12.29 | 0.00 | 28.02 ± 8.45 | 0.00 | 2.78 ± 2.43 | 0.18 | 0.82 ± 1.14 | 0.57 |
| 2035 | 127.32 ± 12.50 | 0.00 | 26.03 ± 8.41 | 0.00 | 2.18 ± 2.06 | 0.25 | 0.60 ± 1.01 | 0.66 |
| 2036 | 127.85 ± 12.59 | 0.00 | 24.15 ± 8.27 | 0.00 | 1.75 ± 1.81 | 0.33 | 0.46 ± 0.93 | 0.74 |
| 2037 | 128.83 ± 12.67 | 0.00 | 22.59 ± 8.27 | 0.00 | 1.44 ± 1.64 | 0.41 | 0.38 ± 0.87 | 0.80 |
| 2038 | 129.84 ± 12.60 | 0.00 | 21.08 ± 8.06 | 0.00 | 1.16 ± 1.50 | 0.50 | 0.29 ± 0.76 | 0.84 |
| 2039 | 130.29 ± 12.58 | 0.00 | 19.67 ± 7.82 | 0.00 | 0.92 ± 1.35 | 0.57 | 0.24 ± 0.74 | 0.88 |
| 2040 | 130.66 ± 12.69 | 0.00 | 18.52 ± 7.69 | 0.00 | 0.8 ± 1.28 | 0.63 | 0.19 ± 0.68 | **0.90** |
| 2041 | 131.02 ± 12.50 | 0.00 | 17.30 ± 7.63 | 0.00 | 0.67 ± 1.18 | 0.69 | 0.14 ± 0.55 | 0.93 |
| 2042 | 131.44 ± 12.26 | 0.00 | 16.11 ± 7.51 | 0.00 | 0.58 ± 1.12 | 0.73 | 0.10 ± 0.44 | 0.94 |
| 2043 | 132.18 ± 12.01 | 0.00 | 15.06 ± 7.24 | 0.01 | 0.47 ± 1.00 | 0.77 | 0.07 ± 0.38 | 0.96 |
| 2044 | 132.42 ± 12.18 | 0.00 | 14.11 ± 7.11 | 0.01 | 0.40 ± 0.95 | 0.80 | 0.06 ± 0.35 | 0.97 |
| 2045 | 132.55 ± 12.14 | 0.00 | 13.25 ± 7.08 | 0.01 | 0.35 ± 0.90 | 0.83 | 0.04 ± 0.27 | 0.98 |
| 2046 | 132.92 ± 12.11 | 0.00 | 12.45 ± 6.96 | 0.02 | 0.28 ± 0.81 | 0.87 | 0.03 ± 0.22 | 0.98 |
| 2047 | 132.81 ± 11.81 | 0.00 | 11.61 ± 6.75 | 0.02 | 0.24 ± 0.78 | 0.88 | 0.03 ± 0.25 | 0.99 |
| 2048 | 132.87 ± 11.87 | 0.00 | 11.07 ± 6.72 | 0.02 | 0.20 ± 0.71 | **0.91** | 0.03 ± 0.23 | 0.99 |
| 2049 | 132.62 ± 11.75 | 0.00 | 10.53 ± 6.66 | 0.03 | 0.16 ± 0.63 | 0.92 | 0.02 ± 0.19 | 0.99 |
| 2050 | 132.71 ± 11.97 | 0.00 | 9.99 ± 6.55 | 0.03 | 0.15 ± 0.59 | 0.92 | 0.02 ± 0.19 | 0.99 |
| 2051 | 132.91 ± 11.80 | 0.00 | 9.42 ± 6.51 | 0.04 | 0.12 ± 0.57 | 0.94 | 0.01 ± 0.14 | 0.99 |
| 2052 | 133.21 ± 11.82 | 0.00 | 8.92 ± 6.34 | 0.04 | 0.11 ± 0.51 | 0.95 | 0.00 ± 0.08 | 1.00 |
| 2053 | 133.17 ± 11.66 | 0.00 | 8.37 ± 6.04 | 0.05 | 0.09 ± 0.44 | 0.95 | 0.00 ± 0.09 | 1.00 |
| 2054 | 133.12 ± 12.15 | 0.00 | 7.78 ± 5.91 | 0.06 | 0.08 ± 0.41 | 0.96 | 0.00 ± 0.09 | 1.00 |
| 2055 | 133.12 ± 12.10 | 0.00 | 7.25 ± 5.65 | 0.07 | 0.06 ± 0.33 | 0.97 | 0.00 ± 0.07 | 1.00 |
| 2056 | 133.23 ± 11.86 | 0.00 | 6.88 ± 5.56 | 0.08 | 0.05 ± 0.35 | 0.97 | 0.00 ± 0.06 | 1.00 |
| 2057 | 133.29 ± 11.94 | 0.00 | 6.57 ± 5.46 | 0.09 | 0.05 ± 0.34 | 0.97 | 0.00 ± 0.06 | 1.00 |
| 2058 | 133.79 ± 12.12 | 0.00 | 6.19 ± 5.24 | 0.10 | 0.03 ± 0.25 | 0.98 | 0.00 ± 0.06 | 1.00 |
| 2059 | 133.68 ± 12.29 | 0.00 | 5.88 ± 5.17 | 0.12 | 0.03 ± 0.26 | 0.98 | 0.00 ± 0.13 | 1.00 |
| 2060 | 133.79 ± 11.94 | 0.00 | 5.61 ± 5.15 | 0.13 | 0.03 ± 0.29 | 0.99 | 0.00 ± 0.09 | 1.00 |
| 2061 | 133.53 ± 12.06 | 0.00 | 5.42 ± 5.16 | 0.14 | 0.03 ± 0.25 | 0.99 | 0.00 ± 0.13 | 1.00 |
| 2062 | 133.43 ± 12.01 | 0.00 | 5.29 ± 5.03 | 0.16 | 0.02 ± 0.18 | 0.99 | 0.00 ± 0.13 | 1.00 |
| 2063 | 133.29 ± 12.02 | 0.00 | 5.03 ± 5.03 | 0.17 | 0.01 ± 0.17 | 0.99 | 0.00 ± 0.09 | 1.00 |
| 2064 | 133.34 ± 12.24 | 0.00 | 4.76 ± 4.90 | 0.19 | 0.01 ± 0.15 | 0.99 | 0.00 ± 0.06 | 1.00 |
| 2065 | 133.53 ± 12.30 | 0.00 | 4.49 ± 4.69 | 0.20 | 0.02 ± 0.21 | 0.99 | 0.00 ± 0.06 | 1.00 |
| 2066 | 133.32 ± 11.93 | 0.00 | 4.32 ± 4.69 | 0.22 | 0.02 ± 0.20 | 0.99 | 0.00 ± 0.09 | 1.00 |
| 2067 | 133.15 ± 12.14 | 0.00 | 4.10 ± 4.55 | 0.24 | 0.01 ± 0.09 | 0.99 | 0.00 ± 0.09 | 1.00 |
| 2068 | 133.54 ± 12.10 | 0.00 | 3.85 ± 4.43 | 0.27 | 0.01 ± 0.11 | 1.00 | 0.00 ± 0.06 | 1.00 |
| 2069 | 133.73 ± 12.01 | 0.00 | 3.66 ± 4.25 | 0.27 | 0.01 ± 0.11 | 1.00 | 0.00 ± 0.09 | 1.00 |
| 2070 | 133.89 ± 11.89 | 0.00 | 3.53 ± 4.16 | 0.29 | 0.01 ± 0.12 | 1.00 | 0.00 ± 0.09 | 1.00 |
| 2071 | 134.38 ± 11.84 | 0.00 | 3.45 ± 4.19 | 0.30 | 0.00 ± 0.11 | 1.00 | 0.00 ± 0.06 | 1.00 |
| 2072 | 134.21 ± 11.81 | 0.00 | 3.32 ± 4.08 | 0.32 | 0.00 ± 0.10 | 1.00 | 0.00 ± 0.09 | 1.00 |

\* Bold letters indicate the year in which the population viability analysis projected that the Japanese Murrelets on Eboshijima will experience a higher risk (> 90%) of extinction.