Table S1. Parameter estimates (posterior mean and 95% Bayesian confidence interval in the bracket) of model 1 for the wind-damage probability

Parameter	Estimate	Parameter	Estimate
b_0	-12.071 [-62.448, 27.879]	e_2(Jan)	0.210 [-0.853, 1.661]
b_1	0.303 [0.168, 0.467]	e_2(Feb)	0.253 [-0.714, 1.741]
e_1(N)	1.654 [0.096, 3.438]	e_2(Mar)	-0.172 [-1.813, 0.899]
e_1(NNE)	0.912 [-1.679, 3.09]	e_2(Apr)	-0.137 [-1.762, 1.079]
e_1(NE)	1.700 [-0.386, 4.197]	e_2(May)	0.016 [-1.226, 1.328]
e_1(ENE)	2.403 [-0.106, 5.698]	e_2(Jun)	-0.145 [-1.512, 0.900]
e_1(E)	1.768 [-1.102, 5.264]	e_2(Jul)	-0.038 [-1.416, 1.125]
e_1(ESE)	1.468 [-1.585, 5.397]	e_2(Aug)	0.242 [-0.591, 1.483]
e_1(SE)	1.180 [-1.190, 4.269]	e_2(Sep)	0.097 [-0.731, 1.096]
e_1(SSE)	0.103 [-2.262, 2.772]	e_2(Oct)	-0.219 [-1.353, 0.618]
e_1(S)	-0.862 [-2.380, 0.527]	e_2(Nov)	-0.267 [-2.005, 0.816]
e_1(SSW)	-2.332 [-4.435, -0.685]	e_2(Dec)	0.158 [-1.021, 1.825]
e_1(SW)	-3.015 [-5.906, -0.897]	σ_{e_2}	0.712 [0.077, 2.284]
e_1(WSW)	-2.520 [-6.410, 0.136]	b_2	0.055 [-0.391, 0.603]
e_1(W)	-1.787 [-5.955, 1.312]	*vo* (1901-10)	75.817 [49.356, 104.001]
e_1(WNW)	-1.068 [-4.669, 1.905]	*vo* (1911-20)	77.302 [51.253, 107.196]
e_1(NW)	-0.326 [-2.445, 1.471]	*vo* (1921-30)	82.999 [61.296, 106.059]
e_1(NNW)	0.722 [-1.012, 2.451]	*vo* (1931-40)	85.966 [65.997, 108.804]
σ_{e_1}	1.701 [0.629, 3.618]	*vo* (1941-50)	95.61 [74.541, 118.718]
		vo (1951-60)	106.594 [76.311, 131.672]
		vo (1961-70)	104.742 [72.353, 141.603]
		vo (1971-80)	107.025 [75.192, 134.122]
		vo (1981-90)	112.66 [72.274, 164.478]
		σ_{vo}	17.591 [1.07, 45.563]
		$\sigma_{vo,de}$	14.569 [0.611, 43.423]

Table S2. Parameter estimates (posterior mean and 95% Bayesian confidence interval in the bracket) of model 2 for the wind-damage probability

Parameter	Estimate	Parameter	Estimate
b_1	0.312 [0.177, 0.512]	e_2(Jan)	0.233 [-0.831, 1.749]
e_1(N)	1.730 [0.123, 3.613]	e_2(Feb)	0.278 [-0.725, 1.832]
e_1(NNE)	1.018 [-1.644, 3.279]	e_2(Mar)	-0.166 [-1.782, 1.004]
e_1(NE)	1.657 [-0.477, 4.262]	e_2(Apr)	-0.098 [-1.770, 1.136]
e_1(ENE)	2.397 [-0.182, 6.123]	e_2(May)	0.047 [-1.176, 1.453]
e_1(E)	1.814 [-1.274, 5.597]	e_2(Jun)	-0.200 [-1.697, 0.858]
e_1(ESE)	1.613 [-1.519, 6.001]	e_2(Jul)	-0.094 [-1.587, 1.056]
e_1(SE)	1.290 [-1.115, 4.723]	e_2(Aug)	0.231 [-0.618, 1.475]
e_1(SSE)	0.161 [-2.293, 2.999]	e_2(Sep)	0.108 [-0.725, 1.177]
e_1(S)	-0.901 [-2.530, 0.499]	e_2(Oct)	-0.231 [-1.465, 0.660]
e_1(SSW)	-2.398 [-4.695, -0.743]	e_2(Nov)	-0.274 [-2.118, 0.868]
e_1(SW)	-3.163 [-6.343, -0.946]	e_2(Dec)	0.167 [-1.058, 1.915]
e_1(WSW)	-2.665 [-6.981, -0.052]	σ_{e_2}	0.741 [0.094, 2.400]
e_1(W)	-1.929 [-6.326, 1.303]	e_3(1901-10)	-8.365 [-14.826, -4.623]
e_1(WNW)	-1.112 [-4.989, 1.875]	e_3(1911-20)	-7.116 [-11.664, -4.036]
e_1(NW)	-0.305 [-2.421, 1.553]	e_3(1921-30)	-8.180 [-13.645, -4.885]
e_1(NNW)	0.793 [-0.948, 2.588]	e_3(1931-40)	-7.583 [-12.346, -4.565]
σ_{e_1}	1.772 [0.694, 3.725]	e_3(1941-50)	-7.151 [-11.643, -4.276]
		e_3(1951-60)	-6.627 [-10.697, -3.862]
		e_3(1961-70)	-6.964 [-11.144, -4.310]
		e_3(1971-80)	-7.057 [-11.142, -4.394]
		e_3(1981-90)	-6.158 [-9.603, -3.538]
		σ_{e_3}	1.304 [0.063, 4.554]