
Supplementary material

Effects of Tsunami Shelters in Pandeglang, Banten, Indonesia, Based on Agent-Based Modelling: A Case Study of the 2018 Anak Krakatoa Volcanic Tsunami

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Table S1. Historical data on tsunami disasters in Indonesia. 2018 Palau Tsunami and onwards are not considered.

Year	Number of Events	Fatalities (person)			Damaged Houses (unit)			Damaged Infrastructures (unit)		
		Died and Lost	Wounds or Injuries	Suffered and Evacuated	Heavy	Moderate	Light	Health Facilities	Worship Facilities	Educational Facilities
2014	2	0	0	0	0	0	0	0	0	0
2012	3	11	9	0	0	0	5	0	0	0
2011	1	1	0	67	17	0	17	2	1	0
2010	1	503	498	15,353	517	0	204	5	7	6
2006	3	683	520	6727	1777	0	585	4	22	8
2004	2	165,945	4,662	522,462	179,312	0	0	240	2742	1226
1998	6	0	0	381	0	0	0	0	0	0
1994	1	92	0	0	0	0	0	0	0	0
1992	1	2400	0	0	0	0	0	0	0	113
1991	1	1022	0	0	0	0	0	0	0	0
1979	1	539	0	171	0	0	0	0	0	0
1977	4	472	273	0	0	0	0	0	0	1
1973	1	1500	0	0	0	0	0	0	0	0
1907	1	400	0	0	0	0	0	0	0	0
1861	1	50	0	0	0	0	0	0	0	0

Table S2. Anak Krakatoa eruption-induced tsunami timeline.

Tsunami timeline														
Time (min)	32	34	36	39	45	47	49	51	52	53	55	56	58	60
Sea Level (m)	Up	0.7	−0.65	1.35	−1.25	0.3	0.55	−1.1	−1.3	0.95	0.05	0	0.5	−0.4

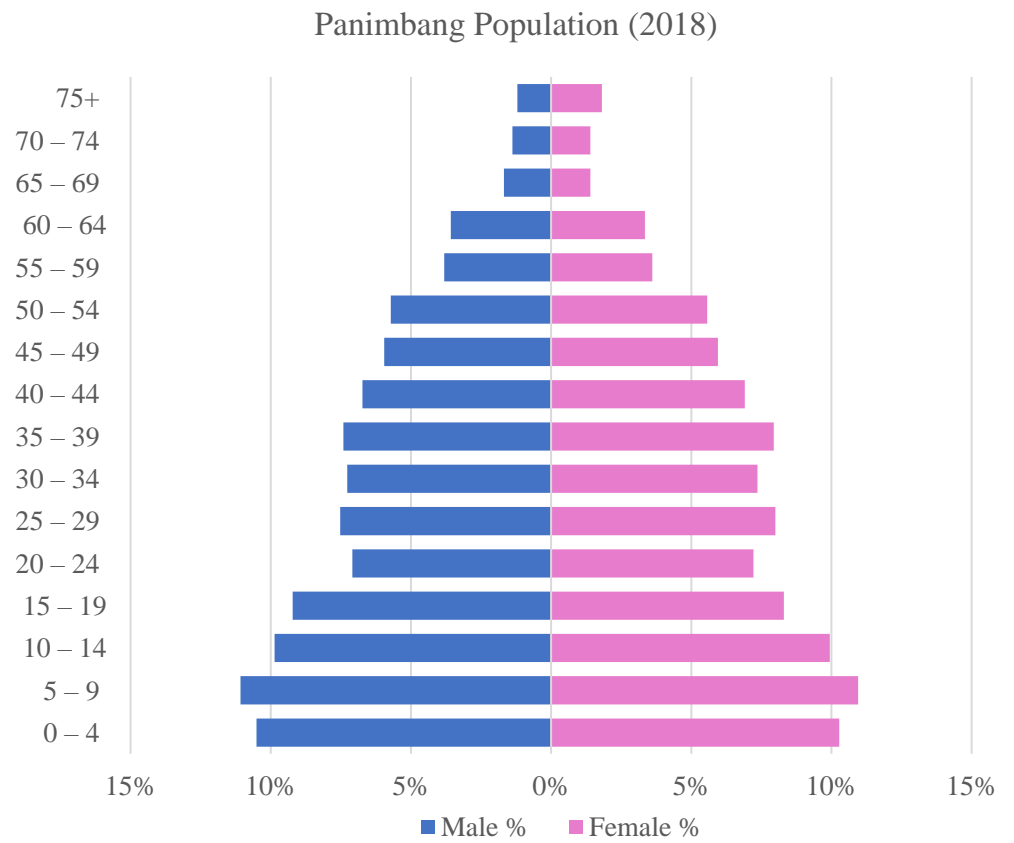


Figure S1. Panimbang population dataset (2018), divided by age group. (Source: ((Statistics Indonesia - Pandeglang District) BPS, 2018)).

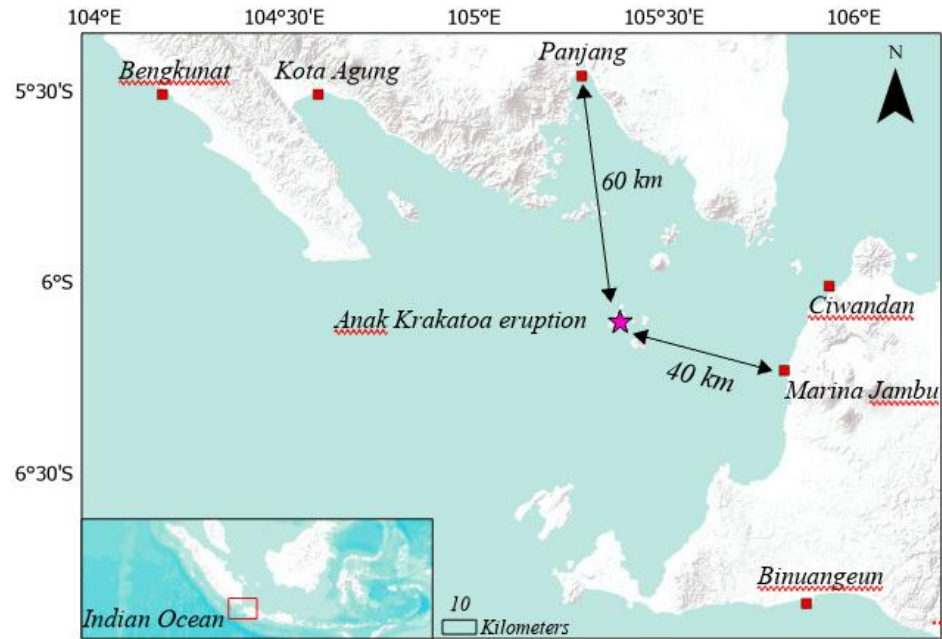


Figure S2. The tide gauge locations in Banten and Lampung Provinces.

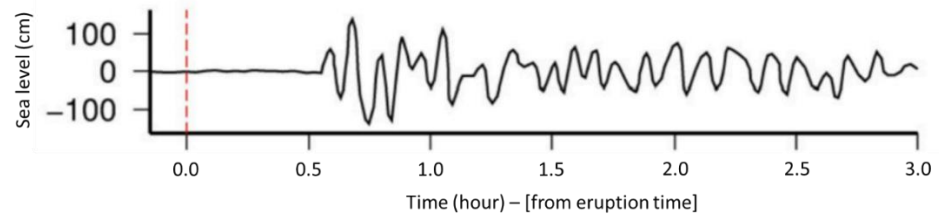
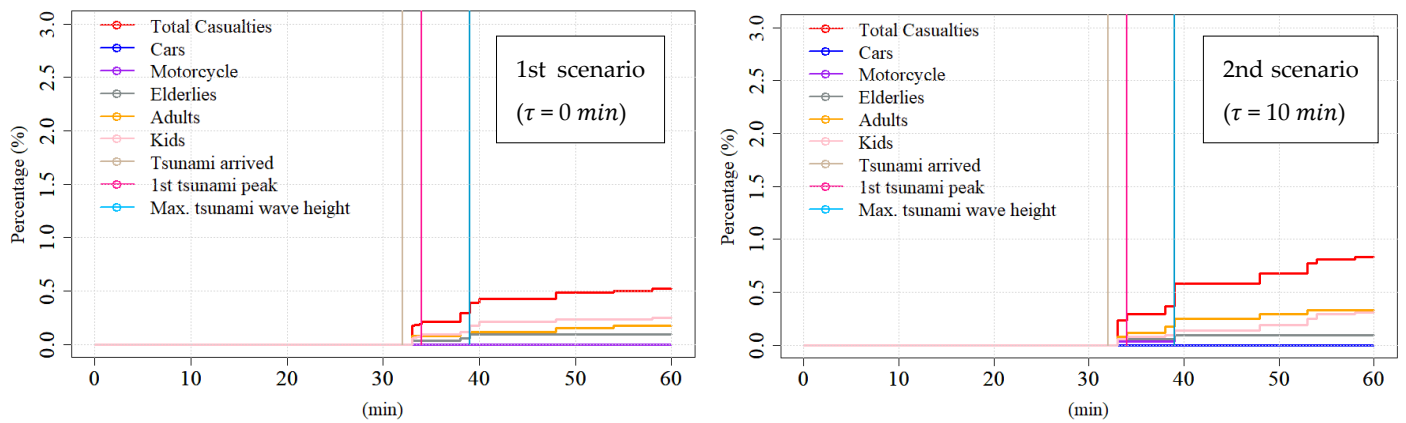


Figure S3. De-tided waveforms at Marina Jambu (Heidarzadeh et al., 2020).



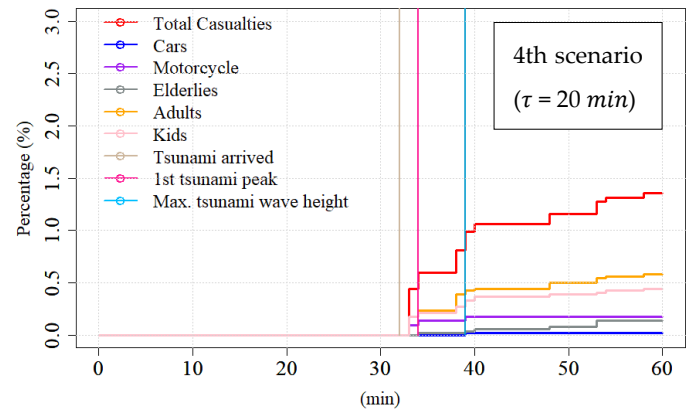
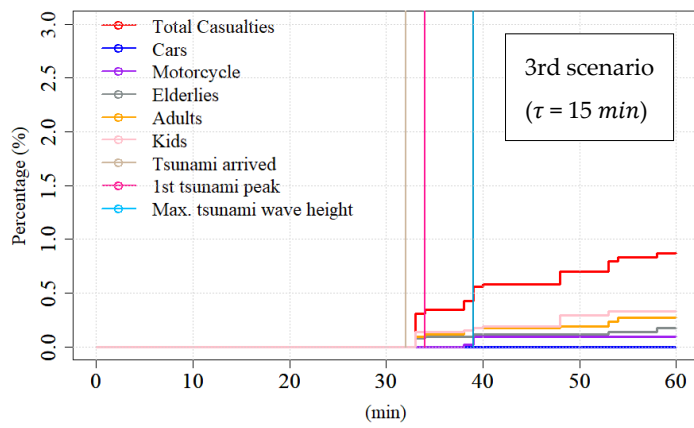


Figure S4. Casualty percentage in the 1st scenario ($\tau = 0 \text{ min}$), the 2nd scenario ($\tau = 10 \text{ min}$), the 3rd scenario ($\tau = 15 \text{ min}$), and the 4th scenario ($\tau = 20 \text{ min}$).