

The GNS 2012 Seismic Hazard Model for New Zealand

The seismic source model

The GNS 2010 seismic source model consists of

The ground motion model

The GNS 2010 ground motion model includes

References

- Si, H. and Midorikawa, S. (2000). New attenuation relationships for peak ground acceleration and velocity considering effects of fault type and site condition. In Proceedings of the 12th World Conference on Earthquake Engineering [Online version](#)

Model summary table

This table summarises the main characteristics of the original implementation of this model

1	Datasets availability	
1.1	Earthquake catalogue	
1.2	Geological database	
1.3	Strong-motion database	
1.4	Site characterization database	
Notes		
2	Methodology for model development	
2.1	Scientific participation (SSHAC levels) and review process	
2.2	Documentation describing model preparation	
2.3	Codes used for model preparation	Not available
Notes		
3	PSHA input model	
3.1	Seismic Source Model	
3.1.1	Area sources	Not included
3.1.2	Grid sources	Included
3.1.3	Crustal faults	Included
3.1.4	Subduction faults	Included
3.1.5	In-slab seismicity	Modelled as XXX

1	Datasets availability	
3.1.6	Non-parametric ruptures	Included
3.1.7	Magnitude-scaling relationships	Hanks and Bakun, 2002 ; Villamor et al., 2007 ; Stirling et al., 2008
3.2	Ground Motion Model	
3.2.0	Tectonic regionalisation	Not included
3.2.1	Models for active shallow seismicity	McVerry et al., 2006
3.2.2	Models for subduction interface	McVerry et al., 2006
3.2.3	Models for subduction intraslab	McVerry et al., 2006
3.2.4	Models for stable continental regions	Not included
3.2.5	Models for deep non-subduction sources	Not included
3.2.6	Models for volcanic areas	McVerry et al., 2006
3.3	Site Response Model	
3.3.1	Based on GMPEs	Yes
3.3.2	Based on site-response analysis	No
3.4	Epistemic uncertainties	
3.4.1	Seismic Source Model	Not included
3.4.1	Ground Motion Model	Not included
3.4.2	Site Response Model	Not included
Notes		
4	Hazard Input Description	
4.1	Hazard input document	Not available
4.2	Input files	Available
Notes	Information about this model can be found in Stirling et al., 2013	
5	Calculation	
5.1	Software	Not available
5.2	Results	
5.2.1	Hazard curves	Available
5.2.2	Hazard maps	Available
5.2.3	Uniform hazard spectra	Not available
5.2.4	Disaggregation	Not available
5.2.5	Stochastic event sets	Not available
5.2.6	Ground motion fields	Not available
Notes	The results of the calculation can be downloaded from this website: http://www.j-shis.bosai.go.jp/	

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