**Modifying Deaggregation (Disaggregation) Input Files**Written by E. R. Abbott. Modified 13 June 2018.

Install whatever editor you want in your VM, however I like to edit everything in Spyder (a code editing assistance tool). The editor vi is automatically installed, so if you are comfortable with it, please feel to use it.

Always change.

Always evaluate/change if your analysis requires it.

Occasionally change.

Don’t touch this.

IMPORTANT NOTES:

* Between variable and value there always needs to be an equal sign
* Any unused variables need to have a # in front of them.
* The more you include in your input file (ie. the more you ask of your analysis, be it number of spectral periods, values of g per spectral period, number of probabilities of exceedance (poes) to solve for) will slow down your analysis. This is ok, but something to be aware of.

TIPS FOR DISAGGREGATION ANALYSES:

* We tend to present analyses disaggregated by magnitude and distance. The magnitude bins are usually 0.2 size, distance bins are usually 20 km size.
* OpenQuake is currently only experimenting with disaggregation by source. In order to best evaluate contributing sources, we recommend running two analyses: one as above to be presented in your report, another with magnitude bins of 0.1 and distance bins of 1 km. This second analysis should be fine enough for you to correlate mag-dist bins with specific faults using the outputs of the SiteSourceDistance.py program.
* Before plotting, you will want to convert the mean poe output to percent contribution. Please see 4-post\_processing\_in\_a\_nutshell.docx for more information.

|  |  |  |  |
| --- | --- | --- | --- |
| Category | Variable | Value | Meaning |
| [general] |  |  | General information about your hazard run. |
|  | description | Scenario Calculation for Wellington fault scenario | Description of the type of hazard you are running, with what source models, for where, etc. |
|  | calculation\_mode | scenario | classical = classical PSHA etc. LIZZIE, ADD MORE |
|  | random\_seed | 23 | If you are running multiple sets, etc. setting the random seed allows you to reproduce your ‘randomised’ results. |
| [geometry] |  |  |  |
|  | sites | 174.777 -41.289 | This is your individual site of interest. You can have multiple sites in this section: longitude latitude, longitude2 latitude 2, lon3 lat3).  However, if you are using a site model, this needs to be commented out. |
| [erf] |  |  |  |
|  | rupture\_mesh\_spacing | 0.2 | In km. Can change if you’re running into memory problems (ie. try 2.0 km) |
|  | width\_of\_mfd\_bin | 0.1 | Width of your magnitude-frequency bin. Don’t change for standard source model analyses. |
|  | area\_source\_discretization | 10.0 | The size of grid your area source is broken up into (km). Don’t change for standard source model analyses (we don’t have any area sources in our standard source models at this stage). |
| [site\_params] |  |  |  |
|  | reference\_vs30\_type | inferred | Doesn’t generally change. The other option is ‘measured’ but should be careful in using this as it changes the sigma on low probability events.  \*\*If you are using a site model, this field must be commented out or deleted. |
|  | reference\_vs30\_value | 250.0 | Shear wave velocity at 30 m depth. Should be site-specific.  \*\*If you are using a site model, this field must be commented out or deleted. |
|  | reference\_depth\_to\_2pt5km\_per\_sec | 5.0 | Depth to shear wave velocity of 2.5km/s. Given in km.  Please use the following equation to calculate a proxy for this value if you do not have one.  \*\*If you are using a site model, this field must be commented out or deleted. |
|  | reference\_depth\_to\_1pt0km\_per\_sec | 100.0 | Depth to shear wave velocity of 1km/s. Given in metres.  Please use the following equation to calculate a proxy for this value if you do not have one.  \*\*If you are using a site model, this field must be commented out or deleted. |
|  | site\_model\_file | site-model.xml | Directs you to the site model file containing site condition parameters and locations to use for this study.  \*\*If you are defining your site conditions in this section of the input file, comment this out. |
| [calculation] |  |  |  |
|  | rupture\_model\_file | Rupture\_model-WellWHV.xml | This is the file that contains your source rupture model. It must be in xml format. |
|  | intensity\_measure\_types | PGA | The spectral periods (e.g. PGA, SA(0.1), etc.) for which you would like this calculation to be performed. |
|  | truncation\_level | 3 | Sigma truncation. 3 is standard.  None: Means you are not truncating.  Zero: Means you are looking at the 50th percentile hazard |
|  | maximum\_distance | 300.0 | The distance from your source out to which sources are included in the analysis. Given in km. |
|  | gsim | Bradley2013 | The specific GMPE class you wish to use for the calculation |
|  | ground\_motion\_correlation\_model |  | Two (or three?) are available through OQ, however, for the only examples I’ve ever done we have chosen not to use this parameter. |
|  | ground\_motion\_correlation\_params |  | Two (or three?) are available through OQ, however, for the only examples I’ve ever done we have chosen not to use this parameter. |
|  | number\_of\_ground\_motion\_fields | 1000 | Change this to vary the number of times the calculation will sample from the hazard distribution (e.g. how many times this scenario will play out, so to speak) |
| [output] |  |  |  |
|  | export\_dir | ../output/gmf1000-WellWHV | The directory where the output files will be located. |