**Table S3.1** The alternative input IM in descending order

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***1*** | ***PGA*** | ***6*** | ***PGD*** | ***11*** | ***PGV*** | **16** | ***Arms*** |
| ***2*** | ***V2*** | ***7*** | ***ID2*** | ***12*** | ***VSI*** | **17** | ***EPA*** |
| ***3*** | ***Sa,avg*** | ***8*** | ***CAA*** | ***13*** | ***Arial*** | **18** | ***PGA/PGV*** |
| ***4*** | ***CAV*** | ***9*** | ***DSI*** | ***14*** | ***EPV*** | **19** | ***D70*** |
| ***5*** | ***EPD*** | ***10*** | ***CAD*** | ***15*** | ***ASI*** | **20** | ***D90*** |

**Table S3.2** The alternative input IM in ascending order

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***1*** | ***D*90** | ***6*** | ***ASI*** | ***11*** | ***PGV*** | **16** | ***CAV*** |
| ***2*** | ***PGA*** | ***7*** | ***PGA*/*PGV*** | ***12*** | ***CAA*** | **17** | **Sa,avg** |
| ***3*** | ***D*70** | ***8*** | ***Arial*** | ***13*** | ***CAD*** | **18** | ***PGD*** |
| ***4*** | ***EPA*** | ***9*** | ***EPV*** | ***14*** | ***DSI*** | **19** | ***EPD*** |
| ***5*** | ***A*rms** | ***10*** | ***VSI*** | ***15*** | ***ID*2** | **20** | ***IV*2** |