

RRVS Building survey for building exposure modelling in Valparaíso and Viña del Mar (Chile) V. 1.0.

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2. Citation

When using the data please cite:

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Gómez Zapata, J. C., Pittore, M., Cotton, F., Lilienkamp, H., Shinde, S., Aguirre, P., & Santa María, H. (2022). Epistemic uncertainty of probabilistic building exposure compositions in scenario-based earthquake loss models. In Bulletin of Earthquake Engineering. Springer Science and Business Media LLC. <https://doi.org/10.1007/s10518-021-01312-9>

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3. Data Description

The dataset contains a set of structural and non-structural attributes collected using the GFZ RRVS (Remote Rapid Visual Screening) methodology. It is composed by 604 randomly distributed buildings in the urban area of Valparaiso and Viña del Mar (Chile). The survey has been carried out between November and December 2018 using a Remote Rapid Visual Screening system developed by GFZ and employing omnidirectional images from Google StreetView (vintage: December 2018) and footprints from OpenStreetMap (OSM).

The buildings were inspected by local structural engineers from the Chilean Research Centre for Integrated Disaster Risk Management (CIGIDEN) while collecting their attribute values in terms of the GEM v.2.0 taxonomy (Brzev et al. 2013) through the RRVS web-platform (Haas et al. 2016). This data has been postprocessed in Gomez-Zapata et al., (2022).

4. File description

Data is presented as a csv format file. For each building in the dataset different exposure related attributes are associated. These attributes are encoded according to the GEM taxonomy v2.0 (see <https://taxonomy.openquake.org/>). The following metadata are defined (not all are observable in the RRVS survey):

code	description
gid	identifier
lon	longitude in fraction of degrees
lat	latitude in fraction of degrees
object_id	unique id of the building surveyed
MAT_TYPE	Material Type
MAT_TECH	Material Technology
MAT_PROP	Material Property
LLRS	Type of Lateral Load-Resisting System
LLRS_DUCT	System Ductility
HEIGHT	Height
YR_BUILT	Date of Construction or Retrofit
OCCUPY	Building Occupancy Class - General
OCCUPY_DT	Building Occupancy Class - Detail
POSITION	Building Position within a Block
PLAN_SHAPE	Shape of the Building Plan
STR_IRREG	Regular or Irregular
STR_IRREG_DT	Plan Irregularity or Vertical Irregularity
STR_IRREG_TYPE	Type of Irregularity
NONSTRCEXW	Exterior walls
ROOF_SHAPE	Roof Shape
ROOFCOVMAT	Roof Covering
ROOFSYSMAT	Roof System Material
ROOFSYSTYP	Roof System Type
ROOF_CONN	Roof Connections

FLOOR_MAT	Floor Material
FLOOR_TYPE	Floor System Type
FLOOR_CONN	Floor Connections

5. Acknowledgments

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6. References

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