Minutes from the 3rd year meeting of ByMuR (Bologna, 20-21/01/2014)

20/01/2014

Reports

- Papers
- Draft papers (only titles in the webpage)

Final meeting, to be decided by the summer

- Naples, Rome??
- To check that money can be spent after Nov. 2014. In case, the latest possible. To be decided within summer

Wg4: Tsunamis

- One mechanism per cell… for the future, more appropriate to consider more than one
- Max M=7.5… maybe too small. Test for Mw=8 for level 0 analysis
- Variability in strike: how is it accounted for? (strike, dip, rake) angles are sampled 3 times randomly in the interval +-30 degree for each grid location
- Check spatial map... Why a peak in Capri?
- Size of the slope? It is not accounted for.
- Use hazard curves! The intensity will be flow depth.
- Max epistemic uncertainty to be set (Λ=1)
- Difference between prior – posterior: consider homogeneous origin: data with volcanic origin (pyroclastic flows from Vesuvio) must be in both prior and likelihood
- PTHA version 1.0 (for March) based ONLY on empirical laws. To test the possibility to extend to propagation (at least for earthquakes and for mass failures)

Wg3: Volcanoes

Tephra

- Nothing for Ischia in March (but in v1.1?). A possibility to explore, to include it, is to see the extendibility of the simulation of Vesuvio or CF to the size classes of Ischia (in order to be spatially translated)
- Ischia: complete period of the catalog… why not consider the guessed stress regime (like in CF)?
- Ischia: vent in the prior... Why from 10 to 5 kyr? Why not all? There is a ambiguity in considering only these eruption in the prior.

Flows

- Energy cone (dilute: CF, Ves): how for fragility? Area or velocity?
- Titan 2D (dense: Ves): how for fragility? Flow depth and velocity?
- Combine the two for Vesuvio... How? for now, kept separated, with completely unknown probabilities (uniform between 0 and 1)
- What input for fragility, for both models? discuss between WG1 & WG3
- Link with tsunami, for tytan2d; to be agreed between WG3 and WG4

Wg1: Risk

- N of deads or direct economic losses? Now, only losses on buildings. Explore the possibility to consider both.
- Volcanic risk: tephra+flow, or separated? ... Maybe both may be useful... Start keeping them separated

21/01

Wg2: earthquakes

- shakemap atlas - all microseismic data, + itaca, 84 events
  - Macrozonation: in literature... Reanalyzed, published in Faenza et al. 2013
  - Borcherdt amplification factor. In the final results, to consider more than one?
  - 4 maps: intensity,PGA at 3 percentiles, both at site and on rock
  - Gmpe errors are included in this error, together with the conversion In → PGA error
  - No error, only if there is an instrument that recorded nearby (range of 10 km)
  - Produce results into an agreed format for the hazard likelihood (for each event, the distribution of possible PGA, both on rock and at site)
- Completeness analysis, both historical and stat. Are these alternative models for the likelihood??
- Prior: for March, it will be ready only for the tectonic origin (no volcanoes)
  - 4 models: Poisson, btp, etas + National map
  - Catalog in Ml, akkar&bommer with Mw: conversion is needed
  - Mmax 7.5, to test 8...
  - Note that Poisson has less events, since declustered… lower hazard is expected
  - How to combine models for the Prior?
    - Different possibilities to be tested, possibly increasing the epistemic uncertainties (same GMPE for all models)
    - All models with the same weight
    - To be performed on rock (for March), then also at site
  - Produce results into an agreed format for the hazard prior: hazard curves (probabilities) for predefined values of PGA (possibly, 0.05, 0.10,…, 0.60 g)
- Posterior:
  - to be performed on rock first (both prior and likelihood on rock are available).
  - To use more than one amplification factors
  - After March, to check the stability of results, performing the analysis at site

Software

- How to include the analyses of interaction? To be discussed in WP1-WP5.
- Minor changes to be suggested when people start using it