**Goal:** Do interactions matter in flood impact assessment?

**Method:** Comparative analysis of the current practice and simulations with explicit Interactions

**Baseline simulation:** Current practice

**Experiment I**
- Influence of explicit interactions between material entities
- **Experiment parameter:**
  - 3 levels of interaction
  - Fixed configuration of links (homogeneous)
  - Flood extent and season
  - Spatial coordinates of winery
- **Experiment output:** IMP for each type of interaction

**Experiment II**
- Influence of heterogeneity in size and degree of exposure of farms
- **Experiment parameters:**
  - 6 configurations of links
  - Fixed level of interaction (full interaction)
  - Flood extent and season
  - Spatial coordinates of winery
- **Experiment output:** IMP for each type of configuration

**Analysis of simulations**

**Baseline simulation:** no interaction simulation from experiment I

Baseline scenario vs. rest of IMP from experiment I

Baseline scenario vs. IMP from experiment II

**Workflow of impact simulator**

**input**
- Experiment parameters
- Fixed spatial distribution of entities
- Other parameters

**simulator**
- COOPER model

**Flood extent = 0?**
- yes
- no

**output**
- Business as usual scenario (BAU)
- Flood scenario (FS)

**impact**

**Damage**
- Soil
- Plant (crop)
- Building (equipment)
- Yield

**Variation**
- Wine-making cost
- Vine-growing cost

**IMP = FS - BAU**