## 10.03.2020

* Refined the activity data by aggregating all the input raster files (e.g., CLC, ExpVars, Environmental) at 3 different spatial resolutions (200, 500 and 1000 m)

**To do:**

* Refine the stacking functions by allowing the user to specify the spatial resolution
* Vulnerability 🡪 Include slope and soil texture
  + This should include weighting factors
* Risk = Hazard x Vulnerability

## 11.03.2020

* Recalculated the risk index as defined in the day before
* Helped Cláudia with the classes

**To do:**

* Help Cláudia with the classes
* Help Joana with the N footprint
* Refine the stacking functions by allowing the user to specify the spatial resolution
  + (To refine) Feed these new inputs to the LULC framework

## 12.03.2020

* Ronha
* Recalculated vulnerability based on slope, residence time and soil texture
* Recalculated risk
* Refined stacking function

**To do:**

* (To refine) Feed these new inputs to the LULC framework
* Correct the spatial resolution of Exploratory Variables Params

## 15.03.2020

* Refined CLC and ExpVar input feed to the LULC framework
* Corrected the spatial resolution of CLC and ExpVar

## 16.03.2020

* Run simulations for the Tagus NVZ
* Still trying to refine Ordered\_model LU order

**To do:**

* Refine LULC and LULC\_demand plot functions
* Segment CLUES and ORDERED models into two different scrips
* Start P and C budget (La Noe paper; GRAFS approach)

## 17.03.2020

* Run simulations for the Tagus NVZ
* Finally discovered why all the simulations to fine-tune the order/elasticity were giving different figure of merits in different days: Because set.seed was giving pseudo-random numbers in different sessions, thus changing the training points of CLC\_1990. This is now fixed (hopefully!)

**To do:**

* Gather GRAFS data for P and C budgets

## 18.03.2020

* Fixed the set.seed; now it is only exported if a file doesn’t exist
* Run simulations for the Tagus NVZ/Portugal
* Gather GRAFS data for P and C budgets

## 19.03.2020 – 27.03.2020

* Momentarily finished refining the order of ORDERED\_MODEL, now I am starting to go towards elasticity in CLUES\_MODEL
* Starting to think about scenario:
  + 3 scenarios: SSP1, BAS, SSP5
  + There is climatic data that can easily support these scenarios (e.g., PET; aridity index, temperature, precipitation)
  + Population dynamics for each SSP as well
  + GDP can be modelled
  + Yields can be updated for the future given different levels of technological enhancements; these will influence crop areas

## 27.03.2020 – 06.04.2020

* Finishing paper #2, not much on the PhD
* Downscale historical data (Areas) from the agrarian region to the municipality scale