**Meeting with Isla on 06/03/20**

* Research question/ hypotheses
  + Reformulate Taxa question: How does temporal turnover of ecological communities respond to levels of accessibility across taxa (birds, mammals, terrestrial invertebrates, terrestrial plants)?
  + Leave out spatial turnover
  + Get research questions and hypotheses very thought out!
  + For HPD hypothesis: state that all expected positive but steeper the more accessible
  + Stories:
    - Come up with a story for each outcome of each question (rough idea here)
      * H1 (high accessibility leads to high turnover): humans having large scale impact which is also impacting BD on a large scale. Less human impacted areas seem to work, so conservation efforts should be focussed on that?
      * H0 (no effect of accessibility on turnover): both large and small impact of humans affect biodiversity. Although a lot of importance on wilderness areas, current efforts not enough. Need to look at other drivers.
  + Anticipated results:
    - Write up anticipated results:
      * If we find support for this, this means blabla; if we find support for this, it means blabla
* Data
  + Leave out study ID with 140 000 study (298), but justify more general: exclude studies with more than XXX plots to ensure balanced records
  + Ask Gergana for temporal turnover already calculated as it might take very long to do so
  + Don’t forget the population data
* Model
  + Leave interaction term with accessibility: taxa out, unless very specific reason for interaction within taxa
    - Put mobility into discussion
    - Random slopes for taxa
  + Random effect
    - No random effect tax, because removes variation within taxa
    - Either grid cell/study ID/ plot or grid cell and study ID/plot
      * but intuitively second one
      * first one answers question at grid cell level
  + Only have 1 model for everything! Pick out the stuff you want for each RQ
  + Model checking: Isla has some document
* Transformations
  + HPD
    - scale between 0 and 1
      * Potentially try without scaling
      * Back transform
    - Categorisation only necessary for visualisation; can chose how many categories
      * Eg 3 lines at 25, 50, 75 quartiles or just 2 categories
      * Grid plot as alternative?
  + Centering not needed if I use a zero one beta distribution
* Visualisation
  + Of taxa plots
    - Facet wrap
    - Bar plot with effect sizes
    - Check out raincloud plot (includes sample size and distribution)
  + Plan out figures (with fake data if time allows)
* Planning/writing
  + Set some milestones (eg data analysis done by 20th March, which would also leave 4 weeks to write)
  + Start planning outline more regularly:
    - Dissertation outline
    - Figures
    - Results