Currently Running:

Projpred var selection on ref model

Rerun of variable addition, excluding form

Simulation to see the impact of project or village number

**What does this procedure do:**

The mcmc pair plots can help us determine whether two separate effects actually exist, or whether the model cannot determine which is which. As sample number increases, we begin to see separation between these effects

The partitioning of variance can help us understand at which level most of the variation in a particular indicator is occurring.

This could have implications about how interventions are designed. In theory, it would mean areas are quite similar, and we need to identify what are the characteristics of these areas which

Secondly, this model helps us understand whether effects vary by location.

Multi-level models are used widely, but this simulation, along with the case study, show how they can be translated to understanding the “levels” at which variation occurs.

Moreover, in the case of the data we are seeing, we do not have sufficient projects per area to fully understand whether differences are due to different projects or different countries (although considering the same survey tool was used, it is reasonable). Wider uptake of these tools across areas, along with a modelling procedure that accounts for between survey effects, could help the AR4D development community better understand the between project effects.