**Conceptual framework**:  
**-** Bill: The framework should be more of a roadmap to a specific proposal, rather than the LTER overall  
- Mike: Should find out from NSF the difference between a conceptual framework and conceptual model  
- Aaron: There is no temporal dimension to the current figure. We need to incorporate more long-term data for added value and leverage  
- Alan: May need to invest in a professional graphic designer. Could also use the graphics in publications  
- Todd & Mike: Couldn’t clearly see the mapping of hypotheses onto the framework/model  
- Bob: Could add a figure showing how long term measurements inform the model  
- Bill: Should make all the figure as a set of resources for LUQ group – will help because people view the systems differently based on their discipline  
- Bob: Don’t try to do everything in 1 figure  
  
**LFDP/Rainfall exclusion**- How will seedlings respond to increased drought in LFDP?  
- Much of the data may be able to be collected due to the 2015 drought  
- Need for experiment because we can’t do any manipulations in LFDP  
- Need to look at the model: Can all the parameters be met with 2015 data or not? If not, need to do shelter experiment  
- Jean: Need to look at root traits, not just aboveground traits of seedlings  
- May want to consider trenching upslope of some exclusions  
- Maria: Integrating ecosystem processes work with the tree data could help select sites  
- Tana: The way we measure moisture will be important  
- Mike: Preliminary data is important because it will change interpretation of the data. Some measurement of variation in characteristics should be done before manipulations  
- Height of shelters may constrain where in the understory they can be placed, as well as what can be measured  
- Detailed methods should be provided to the group for comment before the experiment starts  
- Jean: Need to keep in mind the amount of work and figure out who will be doing the fieldwork  
- Bob & Mike: Elevation should be taken into consideration  
  
**Up the Mountain**- Temp is being recorded in every plot along the Sonadora hourly since 2006  
- 3 Met stations need additional sensors  
- Should consider a way to measure changing cloud height – Relative humidity, dew point?  
- All corners need to be mapped for the plots  
- Need to start getting permits, especially if met station is going to be in the wilderness area – should make sure that permit covers everyone who is going to be doing work so we can minimize permits  
- Need manpower to process climate data  
- Andrew: Could set up a Phenocam type system but for measuring cloud heights  
- Aaron: Need to figure out where we actually need sensors – try to tie it back to the hypotheses , try to integrate both time and space  
- Vegetation: Map and measure palm plots. Census seedlings  
- Litter inverts: Need personnel to ID, but can collect anyway  
- Large sampling campaign planned for 2017 – Use annual meeting in June to plan this  
- Decomposition - should be done over the whole gradient in same areas as before in addition to Sonadora plots? Lots of additional effort  
- Bill: Should do a comparison of sites to figure out variation in plots at the same elevations  
- Alan: Should connect climate change impacts to something relevant to many people – maybe parrots

**Hypothesis 3**- Need to quantify contrast between palm and non-palm litter inputs  
- Need to put litter baskets on Prieta A  
- Duration and timing of droughts will change – experiment will allow us to change the timing of the dry period  
- Maybe sample aquatic insects at waterfalls  
- If system is not resilient to first drought, all subsequent experiments will be happening in a different context  
- Movement of shrimp during drought will be monitored  
  
**CTE**- Maybe measure size of leaves as they decompose  
- Invitation to publish in a special issue of Forests – could use Xianbin’s data paired with PRS probe data and Maria’s litter decomp data  
- Methodology and protocols need to be sent to Sarah so she can organize them. Update metadata on website  
- Air drying and refrigerator changes extractable nutrients – Can still do total C and N, total nutrients  
- Should take soil depth profiles yearly

**Hypothesis 6**- Need to budget stable isotope work  
- Leaf lifespan data would help  
- Would be a good unifying project between terrestrial and streams  
- Maybe consider funding through a separate proposal  
  
**Long term data working group**- How many papers use whole dataset versus just a subset?  
- How do you use long-term data to validate models?  
- Need to do a better job explaining not just what will change, but how it will change  
- How much disturbance does it take to push a system out of balance?  
- Bob – Seems like things are getting knocked out by one big event rather than gradual change  
  
**Hypothesis 7**- Back trajectories of moisture could be calculated  
- Taylor et. al “Precise” model  
- More urban development recently on south side of forest  
- Would be useful to have a dataset of urban landscape to put into model  
- Alan: Need an operational definition of drought – Suggestions to follow Larson paper, consecutive days without 1 mm rainfall, or drought monitor groups  
  
**Hypothesis 8**- Need a workshop about novel ecosystems/biotic communities at annual meeting  
- Rewrite hypothesis 8 to be able to show progress at site review  
- “.. lead to increasingly vulnerable communities”