**Toward Ecologically Safe and Socially Just Process and Supply Chain Designs**

1. **Background *(~ 1 to 1.5 pages)***
   1. Motivation
      1. Global goals, future development to achieve net zero, nature positive…
      2. …
   2. Absolute sustainability
      1. Definition of sustainability; nature’s carrying capacity; compared with relative sustainability
      2. Methods in AESA: PB, TES (multiscale)
   3. Safe and just
      1. …
   4. Include AES and S&J in supply chain design
2. ***Li-ion battery sustainable supply chain (~ 2 pages)***
   1. Problem statement:
      1. Process included
      2. System boundary
      3. …
   2. Mathematical framework
      1. Optimization equation
   3. Result
      1. Local optimal (best location for each process)
      2. Supply chain optimal (locations for)
   4. Discussion
      1. Insights of including S&J and ecological threshold
      2. Comparison with Tesla
3. ***Conclusion & future work (0.5 page)***
   1. Value of integrating TES and S&J into design
   2. What can we do next:
      1. Multistage, multiperiod supply chain
      2. Dynamic aspect of TES
      3. Something related to S&J

* ***Plots (~ 1 page)***
* ***Reference (~ 0.5 to 1 page)***