**BEC Project structure**

1. Create the BRT model using BEC zones as fixed effects
2. Data for *BIRDS*:
   1. **RESPONSE:** bird density (vocalizing males / hectare): total across species (not discriminated by species)
   2. **PREDICTORS**:
      1. ~~"BEC\_SUBZONE": as in here https://www.for.gov.bc.ca/hre/becweb/resources/classificationreports/subzones/index.html?~~
      2. "BEC\_ZONE\_CODE": as in here https://www.for.gov.bc.ca/hre/becweb/resources/classificationreports/subzones/index.html?
      3. ~~"CROWN\_CLOSURE": I don’t think we can model with this. This might be more problematic than actually help the predictions... can you take it out of the model?~~
      4. ~~"DistYear\_Log": Year of most recent documented logging disturbance~~
      5. ~~"DistYear\_Nonlog": Year of most recent documented non-logging disturbance.~~
      6. "PROJ\_AGE\_1": Ok
      7. ~~"PROJ\_HEIGHT\_1": This is the height for dominant species, right? We can have this only if we assume that all trees will follow an optimum growth curve based on age. (but I still think this might be too correlated with age, so I am not sure I would keep it…)~~
      8. "SPECIES\_1": Dominant species percentage (Converted to **LCC10** classes)
      9. "SPECIES\_2": Second-dominant species percentage (Converted to **LCC10** classes)
      10. ~~"SPECIES\_PCT\_1": Dominant species percentage~~
      11. ~~"SPECIES\_PCT\_2" : Second-dominant species percentage~~
3. Data for *BEC ZONES*:
   1. Data available, just need to check which variants to use
4. Data for *OTHER PREDICTOR*:
   1. AGE: outputs from the succession model
   2. SPECIES CD and PCT: outputs from the succession model
5. We will do the following:
   1. Model total bird density at the point location level based on attributes (including BEC zone) of the forest stand the point was conducted in..
   2. Predict the model for the forest stands for which that we don’t have bird data, based on forest attributes (including BEC Zone) from the VRI dataset.
   3. Forecast the prediction to scenarios with:
      1. BEC steady with forest succession
      2. BEC zone changing with forest succession
6. Notes: We are considering scenarios without harvesting at this moment.