Simulator passes unit test? yes Model passes unit test? Operators pass unit test? yes Perform well calibrated study -- coverage OK? no yes Perform sensitivity study under different models Report results Minimum ESS < 100? no 

yes 

run MCMCs longer, goto 4 Are tree heights recoverable? no ves Fix hasting ratios or model implementation. goto 4 10. Simulate trees with tree heights of 0.5 substitutions, goto 4 11. 12. Fix code, goto 3 13. Fix code, goto 2 14. Fix code, goto 1