

Figure 1: Realization of a Pareto (A) probability density function and (B) complementary cumulative distribution function compared against equivalent calculations on the HydroLAKES dataset.

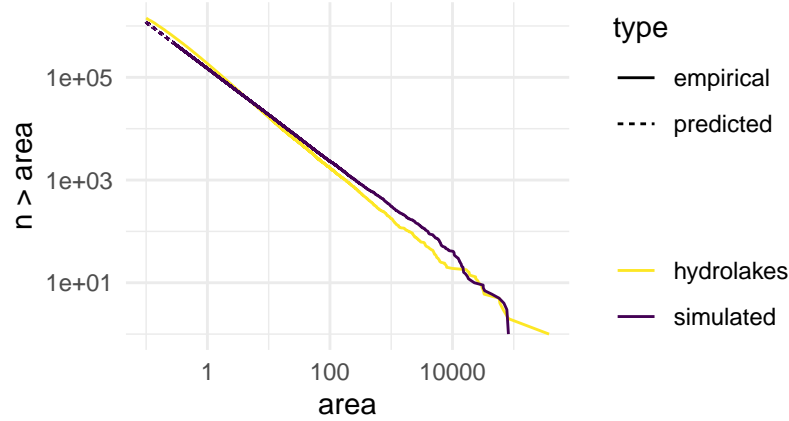


Figure 2: Simulated lake area (purple line) where the portion calculated from the edf ( $\geq 0.1 \text{ km}^2$ ) is denoted by a solid line and the portion calculated from the transformed cdf ( $< 0.1 \text{ km}^2$ ) is denoted by a dashed line. For comparison, the edf of the HydroLAKES dataset (solid yellow line) is also shown.

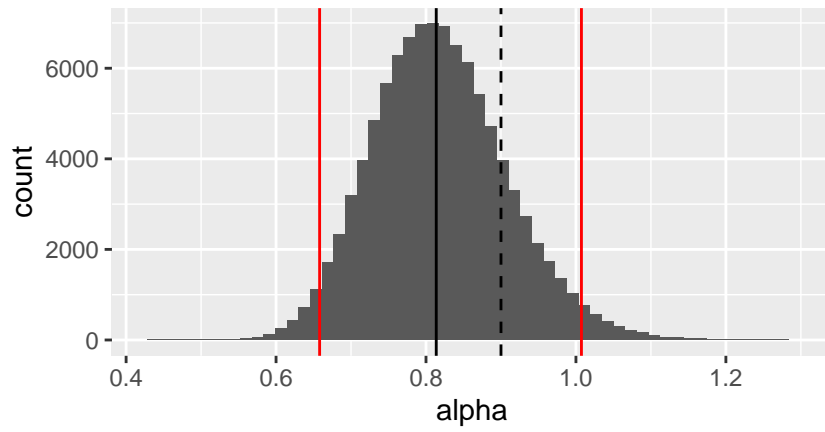


Figure 3: Median (black line) and central 95 percent interval estimates of  $\alpha$  (red lines). Here the 'true'  $\alpha$  is 0.9 and is marked with a dashed line.

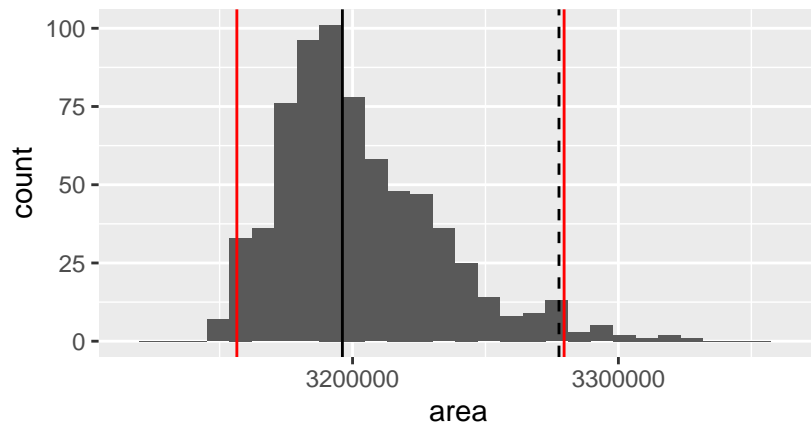


Figure 4: Median (black line) and central 95 percent interval estimates of total lake area (red lines). Here the true total lake area is marked with a dashed vertical line.