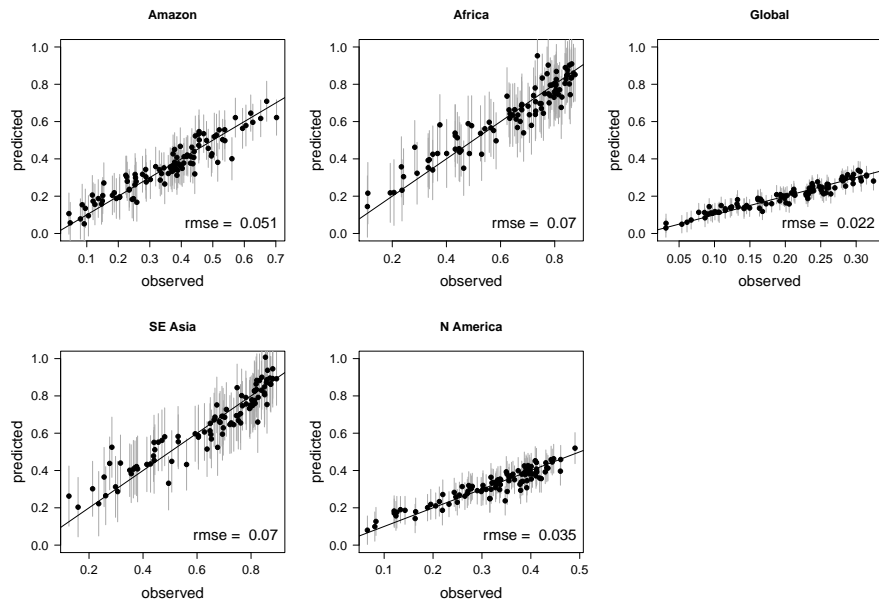**Figure 1.** A map of the forest regions used in the study. Regions are: Amazon 15°S - 15°N, 270°E - 315°E; Central Africa; 15°S - 10°N, 7.5°E - 30°E; SE Asia 12°S - 10°N, 90°E - 150°E; North America 45°N - 65°N, 230°E - 300°E.

Figure 2. Leave-one-out cross validation performance of the emulator, when reproducing each forest fraction. Black points represent the emulator central estimate of a held-out point, with grey lines representing $\pm$ 2 standard deviations.

1