Aboveground biomass variability across intact and degraded forests in the Brazilian Amazon


## Embrapa <br> 




- Largest study of biomass variability in the Brazilian Amazon: Highdensity airborne lidar data (18,000 ha) and 359 coincident inventory plots from 52 intact and degraded forest sites.
- Large and persistent differences in aboveground carbon density (ACD) from reduced impact (11\%) and conventional logging (38\%) and fire (1x: 37\%, 2-3x: 57\%), with a $93 \%$ reduction in forests burned $5 x$.
- Airborne lidar captured heterogeneity in degraded forest carbon stocks not identified by inventory plots or first-generation satellite biomass products (Saatchi et al., 2011, Baccini et al., 2012).
- Study provides critical inputs for REDD+: 1) first regional estimates of emissions factors for degraded Amazon forests, 2) evidence that satellite products have limited sensitivity to ACD variability in frontier forests, and 3) methods for uncertainty propagation.


CMS Projects: Morton-01; Keller-01

