

Combining Lidar and Bioacoustics to Investigate the Impacts of Amazon Forest Degradation on Carbon Stocks, Habitat Structure, and Biodiversity

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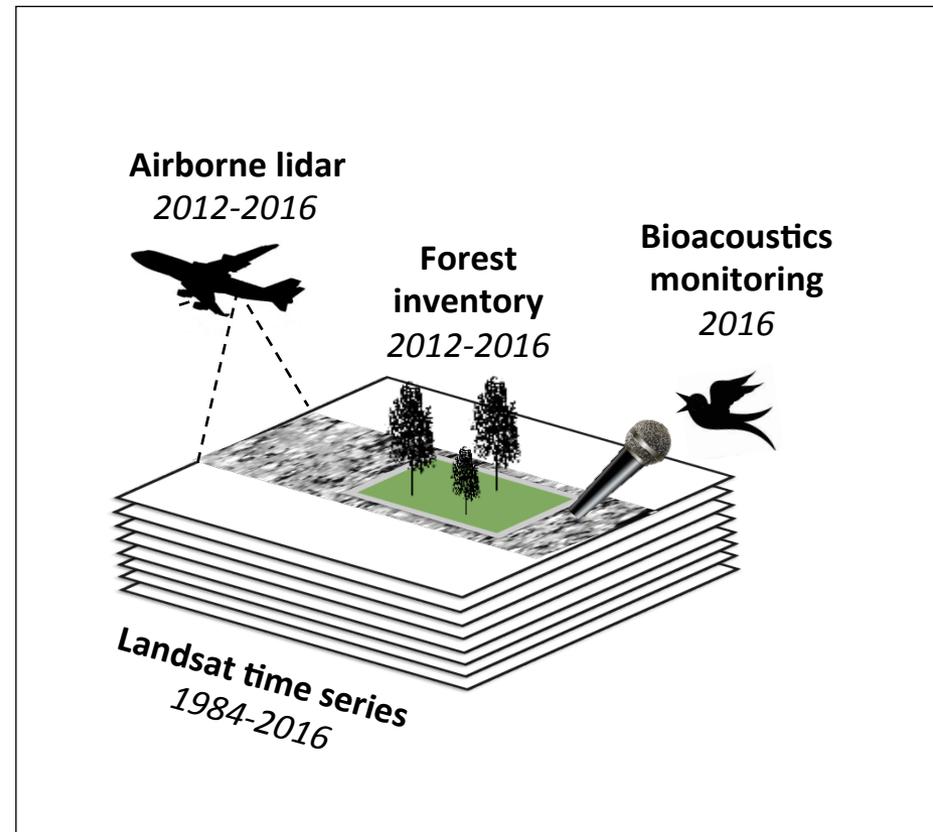
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BACKGROUND

- Amazon forest degradation from logging and fire has increased despite reductions in deforestation.
- Neither degradation nor biodiversity safeguards are well integrated within REDD+.
- Multi-scale, integrated biomass and biodiversity monitoring is needed to prioritize conservation/mitigation strategies that deliver multiple benefits.

SCIENCE GOAL

- To characterize the magnitude and persistence of biomass and biodiversity changes as a function of degradation type, timing, frequency, and severity.



PRELIMINARY RESULTS

- Even when net recovery is considered, carbon losses from both fire and logging are large under time-scales under consideration for REDD+.
- The magnitude of carbon losses from fire are larger and longer-lived than logging.
- Repeated fires represent the largest degradation threat to residual carbon stocks, with the potential to deplete aboveground biomass by >90%.

