Science Question
The UN-REDD+ program stipulates payments to countries that can prove a reduction of emissions of terrestrial carbon. But estimating land change activities that emit carbon (deforestation and forest degradation) at (bi-)annual intervals is inherently complicated – uncertain estimates prevents result-based payments.

Analysis
A continuous map product was created by time series analysis of all Landsat imagery acquired over the study area. Stable land cover, land change and post-disturbance land cover were monitored continuously 2000-2016.

Results
The Colombian Amazon experienced a small but steady decrease in primary forest due to forest-to-pasture conversion, reaching 103 ± 30 kha in 2015 (0.22% of the study area). Around 41 ± 28 kha of pastureland reverted back to forest while losses of secondary forest averaged 20 ± 12 kha.

Significance
These results show that the fate of post-disturbance landscapes can be monitored and estimated with the presented methodology but more work is needed to further reduce the uncertainties. Addition of a buffer stratum to capture omission errors markedly reduced the uncertainty on area estimates.