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Reporting Summary

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Statistical parameters

When statistical analyses are reported, confirm that the following items are present in the relevant location (e.g. figure legend, table legend, main text, or Methods section).

n/a	Confirmed	
☐	☒	The exact sample size (*n*) for each experimental group/condition, given as a discrete number and unit of measurement
☒	☐	An indication of whether measurements were taken from distinct samples or whether the same sample was measured repeatedly
☐	☒	The statistical test(s) used AND whether they are one- or two-sided *Only common tests should be described solely by name; describe more complex techniques in the Methods section.*
☐	☒	A description of all covariates tested
☐	☒	A description of any assumptions or corrections, such as tests of normality and adjustment for multiple comparisons
☐	☒	A full description of the statistics including central tendency (e.g. means) or other basic estimates (e.g. regression coefficient) AND variation (e.g. standard deviation) or associated estimates of uncertainty (e.g. confidence intervals)
☐	☒	For null hypothesis testing, the test statistic (e.g. *F*, *t*, *r*) with confidence intervals, effect sizes, degrees of freedom and *P* value noted *Give P values as exact values whenever suitable.*
☒	☐	For Bayesian analysis, information on the choice of priors and Markov chain Monte Carlo settings
☒	☐	For hierarchical and complex designs, identification of the appropriate level for tests and full reporting of outcomes
☒	☐	Estimates of effect sizes (e.g. Cohen's *d*, Pearson's *r*), indicating how they were calculated
☒	☐	Clearly defined error bars *State explicitly what error bars represent (e.g. SD, SE, CI)*

Our web collection on statistics for biologists may be useful.

Software and code

Policy information about availability of computer code

Data collection	We acknowledge the use of data and imagery from LANCE FIRMS operated by the NASA/GSFC/Earth Science Data and Information System (ESDIS) with funding provided by NASA/HQ
Data analysis	All analyses ran in the R language v.3.4.4. To predict the deforestation in the protected areas of Picachos-Tinigua-Macarena associated with the fires observed, we used a previously published model of deforestation as a function of distance to the nearest fire, the previously published data and code are available at https://datadryad.org/resource/doi:10.5061/dryad.1925k To predict the deforestation in the protected areas of Picachos-Tinigua-Macarena associated with the fires observed, we used a previously published model of deforestation as a function of distance to the nearest fire17. Briefly, we used a rasterized layer of the parks to calculate the distance to the nearest fire each year for 2017 and 2018 using the distanceFromPoints function in the raster v2.6.7 R package. These data (52,232 pixels encompassing ~2327 km2) were then filtered for standing forest cover in 201623, and included alongside the published data in a spatial logistic regression fitted using the INLA package v.17.06.20, while specifying a prediction for the data for the PA axis. The predicted probability values for 2017 were then compared to the Hansen et al 2013 deforestation sites using the area under the curve (AUC) of the plot of true positive rate against the false positive rate, which ranges from 0 to 1, with values closer to 1 corresponding to better models. The ROCR package was used to measure performance and calculate the AUC.

For manuscripts utilizing custom algorithms or software that are central to the research but not yet described in published literature, software must be made available to editors/reviewers upon request. We strongly encourage code deposition in a community repository (e.g. GitHub). See the Nature Research guidelines for submitting code & software for further information.

Data

Policy information about availability of data

All manuscripts must include a data availability statement. This statement should provide the following information, where applicable:

- Accession codes, unique identifiers, or web links for publicly available datasets
- A list of figures that have associated raw data
- A description of any restrictions on data availability

The authors declare that the data supporting the findings of this study are available within the paper and its supplementary information files.

Field-specific reporting

Please select the best fit for your research. If you are not sure, read the appropriate sections before making your selection.

☐ Life sciences ☐ Behavioural & social sciences ☒ Ecological, evolutionary & environmental sciences

For a reference copy of the document with all sections, see nature.com/authors/policies/ReportingSummary-flat.pdf

Ecological, evolutionary & environmental sciences study design

All studies must disclose on these points even when the disclosure is negative.

Study description	Analysis of remotely sensed data for the 2017 and 2018 fire season show that fires have increased during the last year . We developed a spatial logistic regression model that predicts commensurate increases of the probability of per-pixel deforestation within the parks by a mean of 52% percent change for 2018.
Research sample	54 terrestrial protected areas and their limits were obtained from the Colombia Natural National Parks System,we excluded 5 areas maritime areas
Sampling strategy	All fire hotspots detections from MODIS were used.
Data collection	We used Hotspot detections from the MODIS sensor aboard Terra and Aqua satellite
Timing and spatial scale	We used Hotspot detections from the MODIS sensor aboard Terra and Aqua satellite for Jan/Feb 2017 and Jan/Feb 2018 (https://firms.modaps.eosdis.nasa.gov/download/). Each MODIS active fire location represents the center of a 1km pixel that is flagged by the algorithm as containing one or more fires within the pixel.
Data exclusions	We excluded Maritime Protected Areas
Reproducibility	All MODIS data can be downloaded from the ANCE FIRMS operated by the NASA/GSFC/Earth Science Data and Information System (ESDIS). The protected area database, the code for data analysis and deforestation prediction is also available.
Randomization	NA
Blinding	NA

Did the study involve field work? ☐ Yes ☒ No

Reporting for specific materials, systems and methods

Materials & experimental systems

n/a	Involved in the study
☒	☐ Unique biological materials
☒	☐ Antibodies
☒	☐ Eukaryotic cell lines
☒	☐ Palaeontology
☒	☐ Animals and other organisms
☒	☐ Human research participants

Methods

n/a	Involved in the study
☒	☐ ChIP-seq
☒	☐ Flow cytometry
☒	☐ MRI-based neuroimaging