

# New study debunks myths about Amazon rain forests

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A new NASA-funded study has concluded that Amazon rain forests were remarkably unaffected in the face of once-in-a-century drought in 2005, neither dying nor thriving, contrary to a previously published report and claims by the Intergovernmental Panel on Climate Change.

"We found no big differences in the greenness level of these forests between drought and non-drought years, which suggests that these forests may be more tolerant of droughts than we previously thought," said Arindam Samanta, the study's lead author from Boston University.

The comprehensive study published in the current issue of the scientific journal [Geophysical Research Letters](#) used the latest version of the NASA MODIS satellite data to measure the greenness of these vast pristine forests over the past decade.

A study published in the journal *Science* in 2007 claimed that these forests actually thrive from drought because of more sunshine under cloud-less skies typical of [drought](#) conditions. The new study found that those results were flawed and not reproducible.

"This new study brings some clarity to our muddled understanding of how these forests, with their rich source of biodiversity, would fare in the future in the face of twin pressures from logging and changing climate," said Boston University Prof. Ranga Myneni, senior author of the new study.

The IPCC is under scrutiny for various data inaccuracies, including its claim - based on a flawed World Wildlife Fund study -- that up to 40% of the Amazonian forests could react drastically and be replaced by savannas from even a slight reduction in rainfall.

"Our results certainly do not indicate such extreme sensitivity to reductions in rainfall," said Sangram Ganguly, an author on the new study, from the Bay Area Environmental Research Institute affiliated with NASA Ames Research Center in California.

"The way that the WWF report calculated this 40% was totally wrong, while [the new] calculations are by far more reliable and correct," said Dr. Jose Marengo, a Brazilian National Institute for Space Research climate scientist and member of the IPCC.

**More information:** Samanta, A., S. Ganguly, H. Hashimoto, S. Devadiga, E. Vermote, Y. Knyazikhin, R. R. Nemani, and R. B. Myneni (2010), Amazon forests did not green-up during the 2005 drought, *Geophys. Res. Lett.*, 37, L05401, [doi:10.1029/2009GL042154](https://doi.org/10.1029/2009GL042154)

Provided by Boston University Medical Center

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