Amazon Deforestation in Brazil: What Has Not Happened and How the Global Media Covered It

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Doug Boucher[1] and Dora Chi[1]

Abstract

There has been no further change in the deforestation rate in the Brazilian Amazon since our 2013 article in *Tropical Conservation Science* on the dramatic reduction in deforestation in the late 2000s. This lack of change was actually a remarkable occurrence because deforestation remained stable during a period of major economic recession and great political turbulence at the national level. Coverage of Brazilian Amazon deforestation in the global media during this period was misleading, emphasizing short-term increases in deforestation and erroneously presenting them as "balancing" the earlier dramatic reduction. However, the steady level of deforestation during this period does represent a political failure in which national political leaders did not achieve—or even try to achieve—the eminently feasible goal of zero deforestation.

Keywords

deforestation rate, Amazon forest, Brazil, stability, recession, political turmoil, balance as bias

Five years ago Sarah Roquemore, Estrellita Fitzhugh, and I published an article in *Tropical Conservation Science* (*TCS*) entitled "Brazil's Success in Reducing Deforestation" (Boucher, Roquemore, & Fitzhugh, 2013). We described how the rate of deforestation in the Brazilian Amazon had declined dramatically—by more than two thirds from 2005 to 2011—and analyzed some of the drivers of, and proposed explanations for, the decline. In other articles (Boucher, 2014, 2015), I asked whether this change was "transformational," indicating a fundamental alteration in the dynamics of Amazon deforestation, or whether it on the contrary was due to transitory variations in factors such as commodity prices, corporate strategies, and international funding and thus could easily be reversed (Lambin et al., 2018; Macedo et al., 2012).

What Has (Not) Happened Since

So, what has happened to deforestation in the Brazilian Amazon in the 6 years since? In a word, nothing, and that is a remarkable occurrence.

What we mean by "nothing" is shown in Figure 1, which gives the official figures for annual deforestation, based on satellite remote sensing, in Brazil's "Legal Amazon" region since 1988. Since 2011, the last year for which we had such data in our earlier TCS article, deforestation has continued at the same low level, with yearly variations up and down but no apparent trend. Three years showed increases, and 3 years showed decreases. The annual rate varied between a high of 7,893 km^2 and a low of 4,571 km^2 and was 6,947 km^2 in 2017, the most recent year for which we have data. This compares to 6,418 km^2 in 2011—and to the average of 19,500 km^2/year during the baseline period of 1996 to 2005 (Figure 1). The lack of change in the deforestation rate since the rapid reduction in the late 2000s is remarkable because this has been a time of serious economic recession in Brazil and an absolutely chaotic period in Brazilian politics. The tumult has included as follows:

- The impeachment and removal from office of President Dilma Rousseff;

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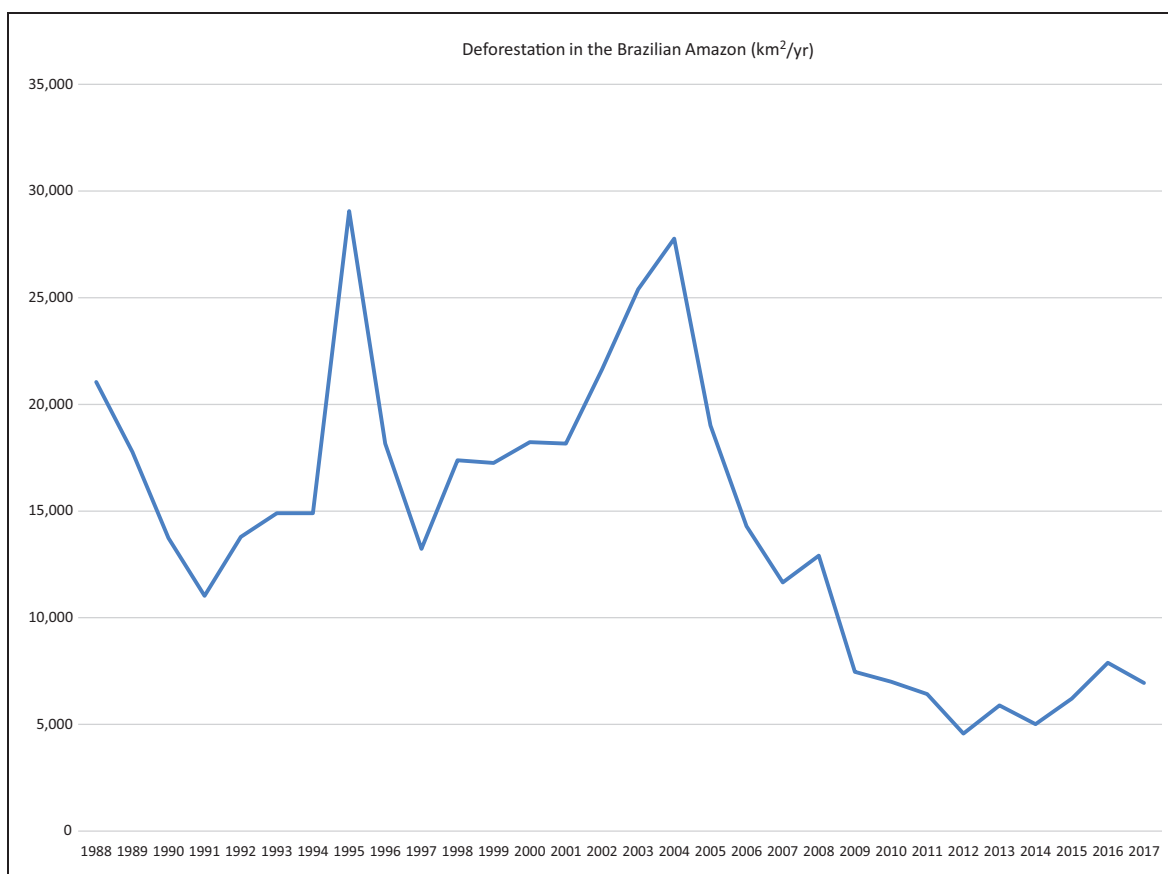Email: dboucher@ucsusa.org

Figure 1. Annual deforestation rate (km^2) in the "Legal Amazon" region of Brazil from 1988 to 2017, from the official "PRODES" figures published by Brazil's National Institute for Space Research (INPE). Note that the year corresponds to the annual cycle in the Amazon so that, for example, the data for Year 2017 cover August 2016 through July 2017. Original data and details of INPE's methodology for PRODES are available online in the publication cited as INPE (2018).

- her succession by Vice-President Michel Temer, whose support rapidly fell to single-digit levels;
- the imprisonment of former President Luis Ignacio Lula da Silva, during whose administration the dramatic drop in deforestation had taken place;
- the passage of legislation weakening the Forest Code and other environmental regulations; and
- indictment of the giant meatpacking company JBS S. A. the world's largest—both for buying beef from deforested regions and for selling adulterated meat.

It is not an exaggeration to say that the corruption scandal known as *Lava Jato* ("Car Wash") has discredited Brazil's entire ruling class across the political spectrum (Watts, 2017). And yet Amazon deforestation, as indicated by the annual data of the last 6 years, has remained unaffected.

While the explanation of this paradox will require much more detailed analysis than we can do here, it does seem that the factors that led to the reduction in deforestation in the late 2000s have continued to operate (Boucher, Elias, Faires, & Smith, 2014, Chap. 2; Seymour & Busch, 2016,

Chap. 7). These included the expansion of protected areas (Soares-Filho et al., 2010), the cattle and soy agreements signed by major corporations in response to nongovernmental organization pressure (Walker, Patel, & Kalif, 2013), the strong pressure exerted on these companies by public prosecutors' enforcement actions (Arima, Barreto, Araújo, & Soares-Filho, 2014), the changes in the behavior of landowners due to the increased transparency of the cattle and soy supply chains (Gibbs et al., 2016), the ability to meet food needs by increased agricultural efficiency (Strassburg et al., 2014), and the rise in importance of deforestation as a domestic political issue. These have maintained their force despite the chaotic changes at the top. The political and economic conditions limiting deforestation have become institutionalized.

The International Media Coverage

Methods

How have the global media covered this story? To examine this, we did a Nexis search of printed stories in

English published during the 5-year period from January 1, 2013, to December 31, 2017. We searched for stories touching on the rate of deforestation in the Amazon forest of Brazil using the Nexis search term "Brazil AND Amazon AND deforestation." We eliminated nonnews articles from the results, including blogs, editorials, and other opinion pieces.

We found a total of 134 stories, which we read and classified according to 13 variables (see Supplemental Material for the complete data set). In addition to noting standard categories such as Date, Title, Author, Media Outlet, and so on, and excerpting the parts of the text related to deforestation rates, we also categorized each story's content using two variables: its overall Tone and whether it did or did not show Balance. These were defined as follows:

- Tone was evaluated based on word choice in the body of the article. It was scored as *Positive* if the text primarily contained words or phrases emphasizing reductions in deforestation (e.g., "success story"), as *Negative* if these emphasized increases in deforestation (e.g., "catastrophic"), and as *Neutral* if the wording emphasized neither or both.
- Balance was evaluated according to whether the article pointed to the large reduction in deforestation in the latter part of the decade of the 2000s, to more recent examples of increases in deforestation, or to both. Balance was scored as *Yes* if the text included both, *No+* if it only discussed the reduction, and *No−* if it only discussed increases. Note that we did not assume that articles would be more accurate if they were balanced (i.e., if they were scored as *Yes* for Balance).

Results and Discussion

The Tone of the majority of the news articles (85) was scored as *Neutral* (85 of the 134 articles). However, among those that were nonneutral, negative coverage heavily outweighed positive, by 34 to 11. In terms of Balance, the majority (75) were classified as balanced (i.e., scored as "*Yes*"), while scores of *No+* and *No−* were about equal (31 and 28, respectively). There was no trend in coverage by year, nor any apparent relationship of the articles' Tone or Balance to the fluctuations in the annual deforestation data (Figure 1).

Thus, the international media to be more negative than positive in their coverage, despite Brazil's dramatic success in reducing deforestation in the late 2000s and the lack of any significant trend since then. Furthermore, they tended to "balance" their coverage of the earlier success by pointing to more recent increases, even though there were just as many recent years with decreases as with increases and no apparent trend in

the deforestation rate from 2011 to 2017 (Figure 1). In other words, the "balanced" coverage actually gave a misleading impression of reality (Boykoff & Boykoff, 2004).

What explains this? We can suggest three possibilities:

- The long journalistic tradition of balanced coverage ("on the one hand . . . on the other hand"), even when the data show that reality is not balanced.
- Misleading interpretation of percentages—the failure to realize that, for example, if a quantity such as the deforestation rate first declines by 70%, and then increases by 70%, it is still only half as large as it originally was.
- The feeling that "No change" is not a story—something must have changed, or else there is no news fit to print.

On this last point, we disagree. The continuation of a relatively low deforestation rate in the Brazilian Amazon is an important phenomenon, for two reasons. First, its maintenance despite the turbulence at the upper levels of society is an indication that transformational change has occurred (Boucher, 2015). But second, the lack of continued progress, which if it had continued would have achieved the historic goal of zero deforestation by 2020, is evidence of failure. And this failure can be blamed, at least in part, on the political and economic leadership of Brazil—not simply because they did not achieve zero deforestation, but because they did not even try (Barreto, Pereira, Brandao, & Baima, 2017; Zero Deforestation Working Group, 2017). The continuation of Amazon deforestation in Brazil at a much lower level than in the 1990s and 2000s is a success, but it is also a measure of how much remains to be done.

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