



# Brazil's new president and 'ruralists' threaten Amazonia's environment, traditional peoples and the global climate

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## Comment

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Jair Bolsonaro, who took office on 1 January 2019 as Brazil's new president, has taken actions and made promises that threaten Brazil's Amazon forest and the traditional people who inhabit it. 'Ruralistas' (hereafter 'ruralists'), namely the large landholders and their representatives who are a key part of the new president's political base (Sassine 2018), are advancing an agenda with environmental impacts that extend to the entire world. Our objective in this comment (including its Supplementary Material, available online) is to summarize this agenda, recent events threatening Amazonia and its peoples and some of the potential responses to these challenges.

Brazil's Atlantic forest and *cerrado* (central Brazilian savanna) biomes have now been almost completely taken over by agribusiness, with only 8–11% remaining of the Atlantic forest and 19–20% of the *cerrado* (MapBiomias 2019; Supplementary Material). This makes ruralists turn their eyes towards the Amazon forest, threatening the region's biodiversity and traditional peoples, as well as the regional and global climate (Fearnside 2017).

During his campaign, Jair Bolsonaro promised to abolish the Environment Ministry and pass its functions to the Agriculture Ministry (see Supplementary Material for sources for all of the statements and events mentioned in the text). Shortly after the election, influential ruralists convinced the new president not to extinguish the Environment Ministry because such a move might induce restrictions on Brazil's exports. Instead of abolishing the Ministry outright, President Bolsonaro moved the deforestation control sector of the Environment Ministry to the Agriculture Ministry, which is also headed by a ruralist. The sector dealing with climate change was abolished and its remaining functions were transferred to the Agriculture Ministry.

President Bolsonaro appointed as environment minister Ricardo Salles, a ruralist who had been the environment secretary for the state of São Paulo, where he essentially dismantled and neutered the agency (Guerra & Ribeiro 2018, Rodrigues 2018, Rodrigues 2019). On 19 December 2018, he was condemned for 'malicious' alteration of the zoning maps of an environmental protection area. Mr Salles holds that observed climate change may be wholly natural and dismisses all discussion of global warming as 'innocuous.'

President Bolsonaro has repeatedly stated his desire to weaken environmental licensing (Fearnside 2018) and has promised to remove licensing authority from IBAMA, the federal environmental agency that is part of the Environment Ministry (Soterroni et al. 2018). Weaker environmental controls are likely to lead to new disasters like the Mariana and Brumadinho mine-tailings dam ruptures (see Supplementary Material). The administration also removed from their posts the IBAMA superintendents in 21 of Brazil's 27 states. The Environment Ministry plans to establish a 'nucleus' within the ministry to review and modify or annul fines issued by IBAMA. Under the current administration, IBAMA has had the lowest performance in its history. IBAMA now often gives advanced warning of where it will carry out inspections for illegal deforestation, which has led to no punishment of offenders despite 95% of the deforestation that occurred in the first 3 months of the presidential administration being illegal (MapBiomias 2019). Deforestation rates have surged, with the rate in June 2019 (the first dry-season month in the new presidency) up 88% over the 2018 rate in the same month (INPE 2019).

Ricardo Salles has been trying to pervert the Amazon Fund to indemnify the deforestation for which Salles has granted amnesty. President Bolsonaro and his Minister of Agriculture, Tereza Cristina Dias, propose 'flexibilizing' the forest code, including extending deadlines for environmental recovery and changing the cut-off date for requiring landowners to restore natural vegetation in areas that they had illegally deforested in their 'areas of permanent protection' and 'legal reserves.' The result would be that many escape any consequence for past violations.

The new president has stated that not a single centimetre of land will be demarcated for indigenous peoples and that both 'conservation units' (protected areas for natural ecosystems) and indigenous lands should be open to agriculture and mining. This is supported by ruralist legislators, who promote what is known as the 'death agenda.' This includes suspending official listing of threatened species, rescinding restriction on hunting wild animals, 'flexibilizing'

environmental licensing, weakening environmental and regulatory agencies, promoting large infrastructure projects such as highways and dams in Amazonia and allowing the use of pesticides that are banned in many countries (see Supplementary Material).

President Bolsonaro denies the existence of anthropogenic climate change (Fearnside 2019) and chose a minister of foreign affairs who considers global warming to be an 'invention of Marxist ideology.' One of his first acts as minister was to abolish the Ministry's sectors dealing with climate change and with the environment. The actions of President Bolsonaro and his ministers favour expansion of monoculture plantations and cattle ranching in Amazonia. An expected consequence of such deforestation is decreasing rainfall in the south and southeast regions of Brazil and in neighbouring countries, such as Argentina (e.g., Zemp et al. 2014). The domestic water supply in heavily populated states such as São Paulo and Minas Gerais would be affected, as would hydroelectric power generation and agriculture, including the production of biofuels (Ferrante & Fearnside 2018). Carbon released by Amazon deforestation contributes to climate change around the globe (IPCC 2014). Considerable alteration of the composition of Amazonian vegetation has already occurred due to climatic change (Esquivel-Muelbert et al. 2018). Amazonia is close to the limit of deforestation that can be tolerated by the region's ecosystems (Lovejoy & Nobre 2018). Various studies have shown the importance of Brazil's conservation units and indigenous lands for maintaining Amazonian forest (e.g., Ferreira et al. 2005, Nepstad et al. 2006, Vitel et al. 2009, Walker et al. 2009, Ricketts et al. 2010, Soares-Filho et al. 2010, Nogueira et al. 2018). These forests provide environmental services, such as supplying the water vapour that falls as rain in other parts of Brazil (D'Almeida et al. 2007, van der Ent et al. 2010, Arraut et al. 2012, Zemp et al. 2014).

Ruralists frequently (but falsely) claim that Brazil's indigenous lands were created due to influence from international non-governmental organizations that are fronts for foreign governments that are allegedly conspiring to impede the growth of Brazilian agribusiness and thus limit competition. Indigenous lands are key factors in conservation because of the large area they protect – c.20% of Brazil's Legal Amazon region. Bolsonaro has moved responsibility for demarcating indigenous lands (*terras indígenas*) from the National Indian Foundation (FUNAI) to the Agriculture Ministry, where this responsibility is assigned to a sector headed by a ruralist. The National Congress passed a measure reversing this action, but President Bolsonaro has countered this for now by issuing a 'provisional measure,' the validity of which awaits a final decision by the Supreme Court. What remains of FUNAI has been moved from the Justice Ministry to a new Ministry of Women, Family and Human Rights, which is headed by another controversial minister (see Supplementary Material).

Acts of vandalism and attacks on environmental and indigenous agencies by loggers, prospectors and ruralists have increased markedly across the Amazon since Bolsonaro's election, and these incidents often show a connection to the new president's discourse. In one case, loggers carrying pro-Bolsonaro placards forced IBAMA inspectors to flee a town in the state of Amazonas. In another case, land-grabbing '*grileiros*' invaded the Uru-Eu-Wau-Wau indigenous land in the state of Rondônia. These *grileiros* threatened to kill the Uru-Eu-Wau-Wau's children if the tribe tried to recover their lands, and they claimed that the natives would no longer be entitled to anything now that Bolsonaro had won the elections.

The 'death agenda' includes abolishing the legal reserves and opening conservation units and indigenous lands to mining, agriculture and ranching. Blocking demarcation of indigenous lands

and labelling social movements as 'terrorists' tend to inflate land conflicts in the Amazon, threatening traditional peoples. The actions currently proposed by the new president and his ruralist supporters would impact forests, biodiversity and traditional peoples, including indigenous peoples, members of '*quilombos*' (communities of Afro-Brazilians descended from escaped slaves) and '*ribeirinhos*' (traditional riverside dwellers). The presidential administration's release of dozens of new agrochemicals has already put the environment, farm workers and national and international consumers at risk.

Funding entities must begin to evaluate the risk of investment in projects that cause deforestation and land conflicts, thus contributing to global warming and to violations of human rights. The same concerns apply to companies and countries that import Brazilian soy, meat and minerals. The responsibilities of the various international actors will be a critical subject of debate as history unfolds in Brazilian Amazonia over the next 4 years.

**Supplementary material.** For supplementary material accompanying this paper, visit [www.cambridge.org/core/journals/environmental-conservation](http://www.cambridge.org/core/journals/environmental-conservation).

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## References

- Arraut JM, Nobre CA, Barbosa HM, Obregon G, Marengo JA (2012) Aerial rivers and lakes: looking at large-scale moisture transport and its relation to Amazonia and to subtropical rainfall in South America. *Journal of Climate* 25: 543–556.
- D'Almeida C, Vorosmarty CJ, Hurrst GC, Marengo JA, Dingman SL, Keim BD (2007) The effects of deforestation on the hydrological cycle in Amazonia: a review on scale and resolution. *International Journal of Climatology* 27: 633–647.
- Esquivel-Muelbert A, Baker TR, Dexter KG, Lewis SL, Brienen RJW, Feldpausch TR, Lloyd J et al. (2018) Compositional response of Amazon forests to climate change. *Global Change Biology* 25: 39–56.
- Fearnside PM (2017) Deforestation of the Brazilian Amazon. In: Oxford Research Encyclopedia of Environmental Science. ed. H Shugart. New York, NY, USA: Oxford University Press [www document]. URL <https://oxfordre.com/environmentalscience/view/10.1093/acrefore/9780199389414.001.0001/acrefore-9780199389414-e-102?print=pdf>
- Fearnside PM (2018) Why Brazil's new president poses an unprecedented threat to the Amazon. *Yale Environment* 360, 8 November 2018 [www document]. URL <https://e360.yale.edu/features/why-brazils-new-president-poses-an-unprecedented-threat-to-the-amazon>
- Fearnside PM (2019) Will President Bolsonaro withdraw Brazil from the Paris Agreement? *Mongabay*, 31 January 2019 [www document]. URL <https://news.mongabay.com/2019/01/commentary-will-president-bolsonaro-withdraw-brazil-from-the-paris-agreement/>
- Ferrante L, Fearnside PM (2018) Amazon sugarcane: a threat to the forest. *Science* 359: 1472.
- Ferreira LV, Venticinque E, de Almeida SS (2005) O desmatamento na Amazônia e a importância das áreas protegidas. *Estudos Avançados* 19(53): 157–166 [www document]. URL <http://www.scielo.br/pdf/ea/v19n53/24086.pdf>
- Guerra R, Ribeiro A (2018) Indicado para Meio Ambiente foi denunciado pelo MP por improbidade administrativa. *O Globo*, 9 December 2018 [www document]. URL <https://oglobo.globo.com/brasil/indicado-para-meio-ambiente-foi-denunciado-pelo-mp-por-improbidade-administrativa-23292920>



- INPE (Instituto Nacional de Pesquisas Espaciais) (2019) Alertas do DETER na Amazônia em junho somam 2.072,03 km<sup>2</sup>. INPE, São José dos Campos, SP, Brazil [www document]. URL [http://www.inpe.br/noticias/noticia.php?Cod\\_Noticia=5147](http://www.inpe.br/noticias/noticia.php?Cod_Noticia=5147)
- IPCC (Intergovernmental Panel on Climate Change) (2014) *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, eds. VR Barros, CB Field, DJ Dokken, MD Mastrandrea, KJ Mach, TE Bilir, M Chatterjee et al. Cambridge, UK: Cambridge University Press.
- Lovejoy TE, Nobre C (2018) Amazon tipping point. *Science Advances* 4: eaat2340.
- MapBiomias (2019) Map Biomias Alerta [www document]. URL <http://plataforma.alerta.mapbiomas.org/>
- Nepstad DC, Schwartzman S, Bamberger B, Santilli M, Ray D, Schlesinger P, Lefebvre P et al. (2006) Inhibition of Amazon deforestation and fire by parks and indigenous lands. *Conservation Biology* 20: 65–73.
- Nogueira EM, Yanai AM, Vasconcelos SS, Graça PMLA, Fearnside PM (2018) Brazil's Amazonian protected areas as a bulwark against regional climate change. *Regional Environmental Change* 18: 573–579.
- Ricketts TH, Soares-Filho B, da Fonseca GAB, Nepstad D, Peterson A, Anderson A, Boucher D et al. (2010) Indigenous lands, protected areas, and slowing climate change. *PLoS Biology* 8: e1000331.
- Rodrigues S (2018) Ricardo Salles foi condenado por fraude em plano de manejo. *O Eco*, 20 December 2018 [www document]. URL <https://www.oeco.org.br/noticias/ricardo-salles-foi-condenado-por-fraude-em-plano-de-manejo/>
- Rodrigues S (2019) 'Esse governo é de vocês', diz Bolsonaro a Ruralistas. *O Eco*, 4 July 2019 [www document]. URL [https://www.oeco.org.br/noticias/esse-governo-e-de-voce-diz-bolsonaro-a-ruralistas/?fbclid=IwAR3\\_ZLfZvNagiQi8Fg\\_12IJoVIunEaSWHZuVCg9QTd-bA6xz-q1efG4qZ0](https://www.oeco.org.br/noticias/esse-governo-e-de-voce-diz-bolsonaro-a-ruralistas/?fbclid=IwAR3_ZLfZvNagiQi8Fg_12IJoVIunEaSWHZuVCg9QTd-bA6xz-q1efG4qZ0)
- Sassine V (2018) Ruralista vai cuidar de demarcação de terras indígenas e licença ambiental no governo Bolsonaro. *O Globo*, 18 December 2018 [www document]. URL <https://oglobo.globo.com/brasil/ruralista-vai-cuidar-de-demarcacao-de-terras-indigenas-licenca-ambiental-no-governo-bolsonaro-23313524>
- Soares-Filho BS, Moutinho P, Nepstad D, Anderson A, Rodrigues H, Garcia R, Dietzsch L et al. (2010) Role of Brazilian Amazon protected areas in climate change mitigation. *Proceedings of the National Academy of Sciences of the United States of America* 107: 10821–10826.
- Soteroni AC, Mosnier A, Carvalho AXY, Câmara G, Obersteiner M, Andrade PR, Souza RC et al. (2018) Future environmental and agricultural impacts of Brazil's Forest Code. *Environmental Research Letters* 13: 074021.
- van der Ent RJ, Savenije HHG, Schaeffli B, Steele-Dunne SC (2010) Origin and fate of atmospheric moisture over continents. *Water Resources Research* 46: W09525.
- Vitel CSMN, Fearnside PM, Graça PMLA (2009) Análise da inibição do desmatamento pelas áreas protegidas na parte Sudoeste do Arco de desmatamento. In: *Anais XIV Simpósio Brasileiro de Sensoriamento Remoto, Natal, Brasil 2009*, eds. JCN Epiphany, LS Galvão, pp. 6377–6384. São José dos Campos, SP, Brazil: Instituto Nacional de Pesquisas Espaciais (INPE) [www document]. URL <http://marte.sid.inpe.br/col/dpi.inpe.br/sbsr%4080/2008/11.13.14.42/doc/6377-6384.pdf>
- Walker R, Moore NJ, Arima E, Perz S, Simmons C, Caldas M, Vergara D, Böhrer C (2009) Protecting the Amazon with protected areas. *Proceedings of the National Academy of Sciences of the United States of America* 106: 10582–10586.
- Zemp DC, Schleussner CF, Barbosa HMJ, van der Ent RJ, Donges JF, Heinke J, Sampaio G et al. (2014) On the importance of cascading moisture recycling in South America. *Atmospheric Chemistry and Physics* 14: 13337–13359.