



Conservation Action Network (CAN)

ASP Action Letter: VOLUME 2, ISSUE 1, January 2021

Call-to-Action to Protect the Nonhuman Primates and Indigenous Peoples of Amazonia

The Board of Directors of the American Society of Primatologists (ASP) approved and endorses this action letter on behalf of the ASP

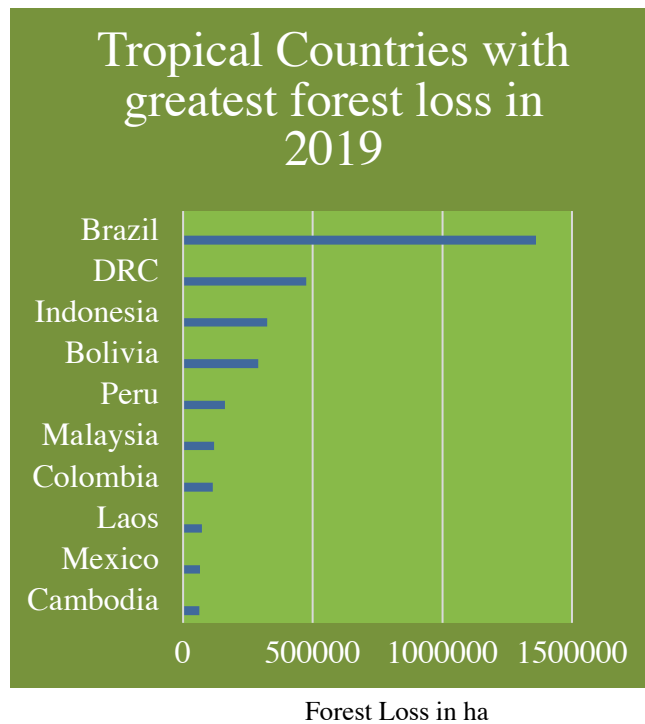
As we are all aware, nonhuman primates are facing an impending extinction crisis worldwide. And, although the proportion of threatened (Vulnerable, Endangered, and Critically Endangered) primate species in Madagascar (93%) and Asia (73%) is considerably greater than currently assessed for mainland Africa (37%) and the Neotropics (36%) (Estrada et al. 2017), relaxed environmental protection leading to increased deforestation, and the expansion of industrial agriculture, cattle ranching, mining, dam construction, oil exploration, and road and rail building throughout Mexico, Central, and South America, along with climate change, imperil the survivorship of both Indigenous Peoples and nonhuman primate communities across the Americas (Estrada et al. 2017, 2019). Here we focus on actions that we can take to protect Amazonia, a region of high primate diversity shared by nine South American nations, including Brazil, which contains ~60% of the Amazon rainforest (Walker 2019).

Between 2002-2019, Brazil lost almost 25 Mha of humid forest, and a total of 56.5 Mha of tree cover. This represents an area equal to the size of France (Global Forest Watch 2020).



Drawing of a mixed species troop of red-bellied tamarins, saddleback tamarins, and callimicos in the Brazilian Amazonian. Courtesy of Michelle Bezanson

In 2019 alone, Brazil lost 1.4 Mha of humid primary forest, accounting for one-third of all humid tropical primary forest lost worldwide. In fact, four of the top seven countries with the most primary forest lost in 2019 were Amazonian nations (Brazil, Bolivia, Peru, and Colombia; <https://www.globalforestwatch.org/>).



In addition, over the past several decades Brazil has constructed or is planning to construct more than **200 dams in Amazonia**, imperiling plant and animal biodiversity, as well as the autonomy and existence of Indigenous communities (Timpe and Kaplan 2017; <https://e360.yale.edu/features/how-a-dam-building-boom-is-transforming-the-brazilian-amazon>). These dams are expected to **flood 10 Mha of Amazonian forest** causing extreme environmental damage (Fearnside 2006). **Rather than relying on hydroelectric power, Brazil could use its vast northern and eastern coastlines to generate environmental friendly wind and solar-based energy.**

Similarly, a proposed railway running 1,300 km across the Amazon to transport mined ores and agricultural products, with major funding from China, is scheduled to begin construction in 2021 (Borges and Brandford 2020). In expressing their concern,

members of Amazon Indigenous communities wrote that the government of the State of Pará, Brazil is “forcing on us a development model that does not represent us, that is imposing railways,... expelling people from their lands, ending our food security, destroying our people, destroying our cultures,... and killing our forests.” (Borges and Branford 2020)

Relatedly, illegal mining on Indigenous lands in the Brazilian Amazon has resulted in a deadly malaria outbreak in several Indigenous communities. This is occurring despite the fact that the constitution of Brazil forbids mining on Indigenous territories (Andrade et al. 2020).

Indigenous Communities are strong stewards of the environment

Recent studies have shown that Indigenous Peoples are better stewards of the environment than national governments (Schleicher et al. 2017; O'Bryan et al. 2020). Lands governed by Indigenous Amazonian communities were found to experience less deforestation and habitat destruction compared to government run 'protected areas' or unprotected areas. In Brazil, "over half of all ILs [Indigenous Lands] retain 90% of natural vegetation" (Begotti and Peres, 2020). Thus, there exists a direct link between protecting Indigenous rights, ecosystems health, and the continued survivorship of nonhuman primate populations

The burning of the Amazon and the effects of climate change on primate survivorship

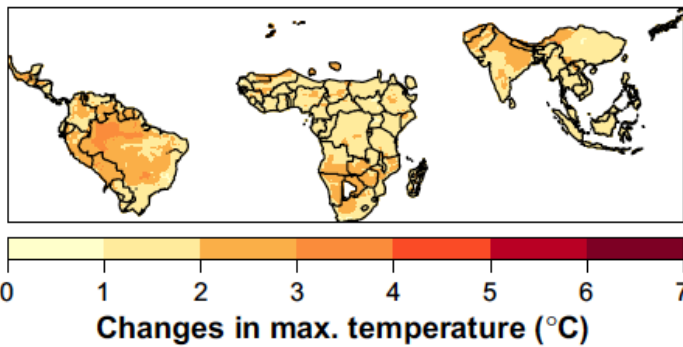
Brazil is the primate-richest nation in the world, with an estimated 120 primate species (Estrada et al. 2020). Based on recent estimates (Rowe and Myers 2016), 43 (36%) primate species in Brazil are threatened, 14 (12%) are Near Threatened (likely to become threatened in the future), and 10 (8%) are Data Deficient (inadequate information to assess conservation status). In the face of a dramatic increase in fires, the majority of which were illegally set by humans, 2.2 Mha of standing forest was burned in the Brazilian Amazon in 2020 (<https://maaproject.org/2020/amazon-fires-recap/>).



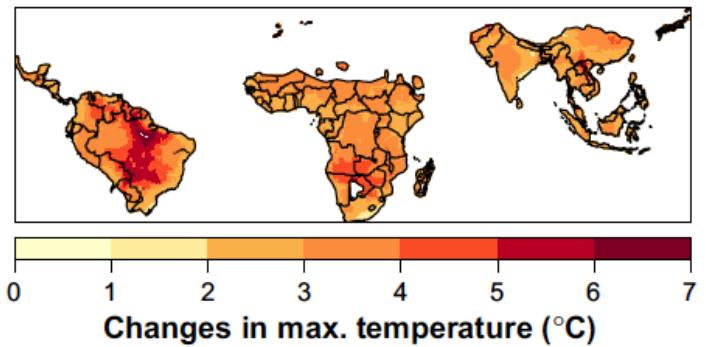
Areas of major fires in the Amazon in 2020. Image from Finer et al. (2020). Orange dots indicate major fires and the blue boundary outlines the Amazonian Watershed.

Combined with the expected effects of global warming, which by the year 2050 is predicted to increase temperatures by up to 3.5°C across 80% of the current range of Amazonian primates (Ribeiro et al. 2016), the long-term survivorship of Neotropical primates is critically threatened. This prediction is reinforced by a study by Carvalho et al. (2019) indicating that assuming a best-case scenario, temperatures in much of the Amazon are expected to increase between 2°C and 4°C by the year 2050. In a worst-case scenario, temperatures in parts of the Amazon will increase by 5°C to 7°C in the next 30 years, which is likely to exceed the physiological and behavioral adaptability required for many primate species to maintain the body temperature below harmful thresholds (Sherwood and Huber 2010). Populations inhabiting forest fragments, as those in the expanding arc of deforestation, will likely face the most extreme challenges to avoid heat stress (Lopes and Bicca-Marques 2017).

(a) Best-case scenario



(b) Worst-case scenario



A comparison of predicted maximum temperature increases in the Amazon based on best- and worst-case scenarios from Carvalho et al. (2019).

Intense public and political pressure are required and a global call-to-action is needed to encourage all Amazonian nations and consumer nations to commit to reduce deforestation, prevent illegal fires set in the Amazon, limit industrial agriculture and cattle ranching to existing deforested regions, and reimagine Amazonian infrastructure development within a zero emissions framework, or we are likely to experience a major primate extinction event by the end of the century.

Take Action! The Time to Act is Now!

- A. Sign the INTERNATIONAL RIVERS global call for a moratorium on new hydropower dams <https://www.rivers4recovery.org/>
- B. Join with AMAZON WATCH to encourage the Biden-Harris Administration to take urgent action to protect the Amazon <https://amazonwatch.org/take-action>

- C. Organize events on your campus or through on-line platforms to educate, inspire, and encourage actions to protect the Indigenous Peoples and nonhuman primate communities of Amazonia
- D. Join the campaign to lobby corporations like BlackRock, Citigroup, JP Morgan Chase, Vanguard Bank, and Dimension Fund Advisors that invest billions of dollars in business ventures that violate Indigenous rights and the environmental health of the Amazon <https://amazonwatch.org/take-action/call-out-us-financial-institutions-for-pouring-billions-into-the-destruction-of-the-amazon>
- E. Shift your diet to more plant-based foods and reduce food waste
- F. Partner with the RAINFOREST ACTION NETWORK to empower local communities, especially Indigenous and other traditional communities to serve as stewards and decision-makers in protecting primates and their habitats <https://www.ran.org/>
- G. Join the social media campaign #EuNaoSouPet (#IAmNotAPet) against the Brazilian government's proposal to legalize the use of wild animals, including Amazonian primates, as pets
- H. Support GLOBAL WILDLIFE CONSERVATION in protecting biodiversity and get inspired by their conservation successes and blog posts on environmental justice, Indigenous resistance, and primate conservation or to sign your name to letters to support environmental justice <https://www.globalwildlife.org/>
- I. Encourage the Brazilian federal and state governments to support existing and new projects of sustainable use of forest products, stimulate investment in biotechnological screening of Amazon biodiversity, enforce policies that mandate the payment for ecosystem services, and to reduce subsidies to cattle ranching and industrial farming in the Amazon region
- J. Support the NATIONAL CENTER FOR RESEARCH AND CONSERVATION OF BRAZILIAN PRIMATES (Centro Nacional de Pesquisa e Conservação de Primatas Brasileiros/CPB-ICMBio; <https://www.icmbio.gov.br/cpb/>) in their efforts to protect and study the Brazilian primates, such as the identification of key Amazonian regions for the establishment of new nature reserves in areas high in species richness or low in legal protection and the planned investigation on the impact of forest fires to primates in nature reserves.
- K. Support the environmental and social programs and projects of the MAMIRAUÁ SUSTAINABLE DEVELOPMENT INSTITUTE (Instituto de Desenvolvimento Sustentável

Mamirauá/IDSM; <https://www.mamiraua.org.br/>), such as the evaluation of the effect of subsistence hunting on primate populations

- L. Support the projects of the INSTITUTE FOR ECOLOGICAL RESEARCH (Instituto de Pesquisas Ecológicas/IPÊ), such as the agrobiodiversity project on the lower rio Negro that integrates de Unesco Green Citizens campaign (<https://www.ipe.org.br/en/news/1845-ipe-s-project-in-amazon-integrates-the-global-platform-unesco-green-citizens>)
- M. Support the INSTITUTO SAUIM-DE-COLEIRA (<http://www.institutosauimdecoleira.org.br/>; <https://www.facebook.com/projetosauimdecoleira/>) and help to save the Critically Endangered pied tamarin (*Saguinus bicolor*), a species endemic to the Manaus region.
- N. Support projects of forest restoration to increase habitat availability and connectivity (e.g., within the arc of deforestation) <https://www.globalforestwatch.org/>
- O. Collaborate with Brazilian universities and research institutes in developing research and conservation projects in Amazonia
- P. Support investigations on the impacts of agrochemicals, and spillovers of infectious diseases from people and livestock on the health of Amazonian primate populations living in contact with the agribusiness frontier <https://news.mongabay.com/2020/03/brazil-sets-record-for-highly-hazardous-pesticide-consumption-report/>
- Q. Support assessments of the remaining populations of threatened Amazonian primates and studies on habitat suitability throughout the species' distributions to subsidize the evaluation of threat statuses and the development of conservation policies, as some taxa seem to be absent or to occur at very low densities in terra firme forests away from the major rivers (<https://www.iucn.org/> and <https://www.globalwildlife.org/>)

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