**Covid-19 pandemic and harmful policies push Brazil into an environmental crisis**

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**Abstract**

Strong evidence indicates that the Brazilian government is taking advantage of the confusion caused by the Covid-19 pandemic to speed-up a wide-ranging environmental setback. We present a timeline of policies and acts taken by the current federal administration against the environment during the pandemic and discuss their consequences. The unprecedented amount of measures affecting environmental policies is especially intended to weaken deforestation control and transparency of environmental agencies, and allow the expansion of harmful activities (e.g. mining and agribusiness) into Protected Areas and Indigenous Lands. The ongoing environmental dismantling in Brazil breaches several international agreements and, if not reverted, will jeopardize nature’s contributions to national and global societies and risk worldwide climate and biodiversity. We highlight strategies that could be taken by economic, scientific, and political sectors to cease the environmental dismantling in Brazil. The suggestions presented here could also be used in other countries facing similar challenges.

**Keywords**: Environmental policies; Protected areas; Indigenous Lands; Amazon; Agribusiness; Deforestation.

The Covid-19 pandemic has had a profound impact on public health and the economies worldwide. Potential impacts of the pandemic on environmental conservation may also be expressive but have just started to be discussed (Corlett et al., 2020; Sarkar et al., 2021). Although short-term positive environmental outcomes have been recorded as a result of social isolation and quarantine, the pandemic may also perversely foster unsustainable development agendas (Buckley, 2020). This is the situation in Brazil, globally, one of the topmost countries in terms of biodiversity and freshwater and carbon stocks, but among the worst-hit nation by the disease, with more than 4 million infections by July 2020 (ECDPC, 2020).

Over the last ten years, a systematic dismantling of the Brazilian environmental policies has occurred led by the growing political influence of the powerful old-fashioned agribusiness sector (Abessa et al., 2019; Fearnside, 2016; Rajão et al., 2020). Recent evidence indicates that the Brazilian government is using the confusion caused by the pandemic as an opportunity to speed-up environmental setbacks. The president Jair Bolsonaro has been speaking out against the lockdown, and as a result destabilizing the social and political situation in the country. During an official closed-door ministerial meeting with the president on 22 April 2020 that went public by court order, the Brazilian Environment Minister clearly stated that the government should take advantage of this crisis to intensify the efforts to dismantle any environmental protection instrument while public attention is on the Covid-19 pandemic (Uribe, 2020). In fact, from March to May 2020, the government launched 195 measures affecting environmental policies (12-fold the number of measures for the same period in 2019), most with damaging consequences for the environment (Gonzales, 2020; Fig. 1). Here, we present a timeline and discuss the consequences of policies and acts taken by the government against the environment during the Covid-19 pandemic in Brazil, highlighting strategies that could be taken to avoid the environmental dismantling in the country.

Initiatives to undermine the IBAMA (i.e. the Brazilian federal agency responsible for law enforcement and deforestation control) intensified under the current federal administration (Pereira et al., 2020), and have continued unabated during the pandemic. These initiatives include the exoneration of personnel without adequate technical reasons, as well as the appointment of staff without environmental training, mainly from the military sector. Furthermore, IBAMA’s transparency was reduced by a February 2020 federal act (Ordinance #560/2020) stating that the disclosure of any information related to the agency must be approved by an internal committee. IBAMA’s autonomy has also been weakened by a Decree (#10,341/2020) enacted in May 2020 that confirmed the Brazilian Army as the operations coordinator for combating deforestation and fires in the Amazon rainforest, operations that have been historically led by IBAMA. These initiatives encourage illegal deforestation throughout Brazil, especially in the Amazon where deforestation and fires are expected to break records in 2020 (TerraBrasilis, 2020).

 Protected Area (PA) management is also suffering severe setbacks. Amidst the pandemic, the federal government is leading a fast and extensive restructuring of the ICMBio (i.e. the federal agency responsible for managing PA) without any prior consultation with the agency's technical staff, the scientific community, or civil society (Gonçalves et al., 2020). This restructuring has already eliminated several headship positions, centralizing PA management under a few posts that can be occupied by any professional, even without technical training (Gonçalves et al., 2020). This new model concentrates technical staff on bureaucratic activities, taking away from the field, and as a consequence inciting illegal activities (e.g. poaching, logging, and mining) inside PAs, as well as debilitating support for tourists, researchers and traditional peoples.

Indigenous Peoples and their lands are also at risk during the pandemic. In the recent past, several pieces of legislation have been proposed to allow economic activities (agribusiness and mining) within Indigenous Lands (IL) (El Bizri et al., 2016; Villén-Pérez et al., 2020). During Bolsonaro’s mandate the demarcation of IL has been abolished since he assumed the presidency (Villén-Pérez et al., 2020). In February 2020, a bill (PL #191/2020) intended to allow mining and other extractive activities in IL was presented for analysis by the Congress, and is currently being processed as a matter of priority. In addition, in April 2020, FUNAI (i.e. the federal agency responsible for Indigenous Peoples’ policies) released a Normative Instruction (#9/2020) that facilitated the registration of private properties on IL that are awaiting demarcation. This decision has placed more than 230 IL in the demarcation process at risk of being invaded, dismembered, or sold. Brazil’s Federal Public Ministry has indicated a lack of legal consistency in this normative; however, a definite legal decision has not yet been done. After the release of this normative, 72 private properties were legalized on non-homologated territories during less than one month (there were only 1 and 29 private properties in 2018 and 2019, respectively; Fonseca and Oliveira, 2020).

The weakening of Brazilian environmental policies will have a profound impact on its remarkable biodiversity as well as diminish nature’s contributions to national and global societies. The recent government measures may push the Amazon rainforest closer to its tipping point, which will compromise climate regulation worldwide (Lovejoy and Nobre, 2018). Reaching a tipping point will have intense and undesirable effects on the hydrological cycle of the South America central region, harming millions of people that live here as well as vast areas of agriculture (Zemp et al., 2014). Contiguous to the Amazon, the rapid loss of native vegetation in the Cerrado, the most diverse tropical savanna in the world, will threaten thousands of endemic species, as well as compromising Brazil’s water and energy security (Resende et al., 2019; Strassburg et al., 2017; Vieira et al., 2018). Moreover, increased deforestation impairs the disease regulation services provided by undisturbed ecosystems, hence increasing the risk of new zoonotic diseases emerging (Everard et al., 2020).

This unrelenting environmental crisis also risks Brazil’s international reputation and its established commitments in international agreements, especially those related to biodiversity conservation and climate change mitigation. Although progress achieved in the implementation of the Aichi Targets of the Convention on Biological Diversity (CDB) has not been published yet, we can anticipate a clear systemic failure by Brazil to achieve the proposed goals (Pacheco et al., 2018). The CDB has started negotiations of the Post-2020 Global Biodiversity Framework with its parties. Brazil should strongly support this ambitious global agenda under pain of losing millions of species in the coming decades and ceasing the provision of multiple ecosystem services, that will lead to an unsustainable and hazardous future (BPBES & PBMC, 2020).

Economic development is understandably a common aspiration of different sectors of Brazilian society, but the dismantling of environmental policies is not the solution for the long-term economic and social problems historically faced in Brazil. The economic activities currently prioritized by the government (agriculture and mining) can generate profits in the short-term, but economic returns from these activities are not equally shared among society and primarily benefit the very politicians who owe their campaign funding to these sectors (Pereira et al., 2020). The vast environmental and social impacts caused by these activities can backfire in the future, producing economic losses besides intensifying inequality (BPBES & PBMC, 2020; Haslam and Tanimoune, 2016; Nazareno and Laurance, 2015). The solution is not easy; however, there are alternatives to the current economic plan, and Brazil’s high levels of biodiversity provide opportunities to lead development that delivers positive outcomes for nature and the different sectors of society in the long run. Several national (BPBES & PBMC, 2020) and international (UN, 2019) initiatives have been proposed that can be used by Brazil to achieve a more sustainable development.

The economic, scientific, and political sectors must take action to compel the Brazilian government to reconsider the current poor environmental decisions and redesign its economic development plan. In the economic sector, other countries and large companies should continue to enable environmental constraints to trade agreements, a strategy that seems to be effective. For instance, the EU-Mercosur trade agreement, signed in 2019, is at risk due to Brazil’s poor governance of Amazon-related environmental issues (Kehoe et al., 2019). In addition, at least 30 foreign investors that together manage trillions of dollars in assets might withdraw their investments in Brazil because of the dismantling of policies to protect the environment and Indigenous Peoples (Phillips, 2020). Internally, the government faces pressure from civil society, companies and even agribusiness associations that advocate there is no need to deforest to expand agricultural production (e.g. Nazareno and Laurance, 2020). Additionally, Brazil has a well-developed and strong scientific sector. Hence, there is the potential in-country to develop more evidence-based policies where government and scientists work together to tackle the environmental, economic, and social challenges Brazil faces. Co-production between science and decision-makers is becoming more common in Brazil, but scientists must interact more closely with policymakers to create a better alignment of their agendas (Karam-Gemael et al., 2018). Finally, the Brazilian government must promote a higher participation of society in decision-making (considering Indigenous Peoples, gender and race), generating diverse and efficient solutions to current and future environment and economic challenges (Maas et al., 2020; Tallis and Lubchenco, 2014).

 The suggestions provided here will help create mechanisms to ensure that environmental dismantling is not the consequence of social turmoil. After all, extreme social events like the current pandemic could happen again and government and society must be better prepared (Schwartz et al., 2020). Covid-19 killed *ca*. 92,000 Brazilians in just six months (between February and July 2020) and will leave a trail of social and economic problems in the country (ECDPC, 2020). The current Brazilian administration cannot use this situation to justify setbacks in environmental policies and weaken Indigenous Peoples’ rights.

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**Fig. 1**: A summary of the recent environmental dismantling in Brazil. The quantity of COVID-19 cases and deaths represents the confirmed data from the last day of each month, according to official Brazilian data. FUNAI: Brazilian federal agency responsible for Indigenous Peoples’ policies; IBAMA: Brazilian federal agency responsible for law enforcement and deforestation control; ICMBio: Brazilian federal agency responsible for PA management; IL: Indigenous lands; PA: protected areas.