



the weekly anthropocene

dispatches from the wild, weird world of humanity and its biosphere



By Sam Matey, November 20 2019

An Environmental Rogue Nation: Bolsonaro's Brazil. Across the board, President Jair Bolsonaro's wannabe-authoritarian, racist, and exploitative regime is causing immense harm to the irreplaceable ecosystems and cultures of Brazil, as illustrated by at least four separate recent developments.

First, on November 5th, apparently out of sheer spite, Bolsonaro repealed the Sugarcane Agroecological Zoning regulation, effectively allowing unrestricted cultivation of sugarcane in Amazon primary forest. While this is unlikely to stimulate an immediate spike in deforestation, as there is abundant land available for sugarcane cultivation elsewhere and the sugar industry did not even request any change to the existing regulations, it could still heat up Amazon land speculation, and it further underscores Bolsonaro's complete disregard-even contempt-for environmental protection.

Second, a massive and mysterious oil spill occurred off Brazil's northeastern coast, with oil first spotted on August 30th. So far, over 4,000 gallons of crude have soiled beaches and mangrove swamps. The culprit is thought to be an

intentional release by a "dark ship" (one that has illegally turned off its transponder), possibly an attempt to jettison Iranian or Venezuelan oil whose discovery could lead to the ship falling foul of American sanctions.

While volunteers have stepped up to contain oil as best they could with tools as simple as shovels (pictured), Bolsonaro's government's response was lackluster in the extreme. They did not appear to know about Brazil's 2013



National Contingency Plan for just such an event, and didn't enact it until October 11th-possibly because Bolsonaro dissolved the executive council of the environmental agency responsible for implementing that plan earlier this year. The Brazilian government has not yet released a chemical analysis of the oil, or an assessment of the ecological damage.

Third, increasingly violent consequences are emerging from Bolsonaro's attacks on FUNAI, the agency responsible for protecting Brazil's indigenous peoples' lands, and his disgusting anti-indigenous rhetoric (he once said that "It's a shame that the Brazilian cavalry hasn't been as efficient as the Americans, who exterminated the Indians" and often speaks of his desire to "rip up" legally demarcated Indigenous lands and give them to ranchers). Bolsonaro has echoed and emboldened evil. Brazil's Indigenous Missionary Council has found that there were 160 cases of land invasion, illegal



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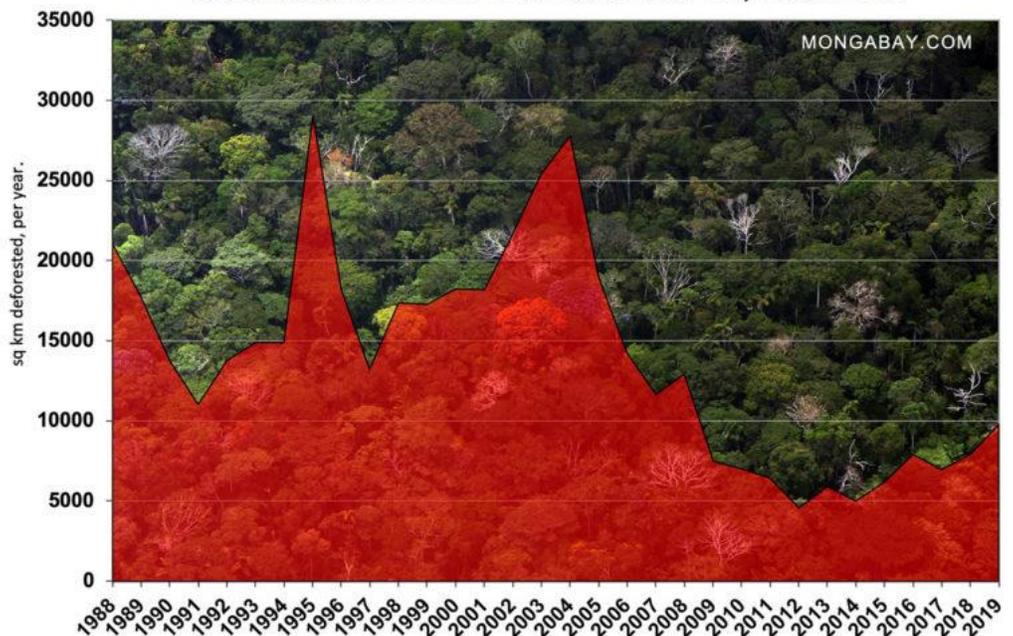
natural resource exploitation (such as illegal logging and mining), and property damage in 153 indigenous territories in the



first nine months of 2019-twice as many as the previous year. And on November 1st, Paulo Paulino Guajajara, age 26, was murdered in an ambush by illegal loggers while on the job patrolling the Araribóia Indigenous Reserve. Paulo Paulino Guajajara (pictured) was a Guardian of the Forest, a member of a group of 120 of the indigenous Guajajara people who work to protect their homeland from illegal logging, and had been threatened by several (white) loggers in the months leading up to his assassination. Guajajara leaders said that the Brazilian police had so far been refusing to arrest any loggers, although an investigation has been opened after the murder. Paulo Paulino Guajajara gave his life to protect his people and his home ecosystem, and his struggle will go on.

Fourth, Bolsonaro's radical deregulation, attacks on agencies responsible for environmental protection, and genocidal rhetoric have already had a devastating effect on the Amazon. Satellite data from the Brazilian space agency found that 3,769 square miles of the Amazon, an area larger than the Yellowstone, was cut down from August 2018 through July 2019, a 30% increase from the previous (pre-Bolsonaro) year. That's the highest level of Amazon deforestation since 2008 (see graph).

Deforestation in the Brazilian Amazon, 1988-2019





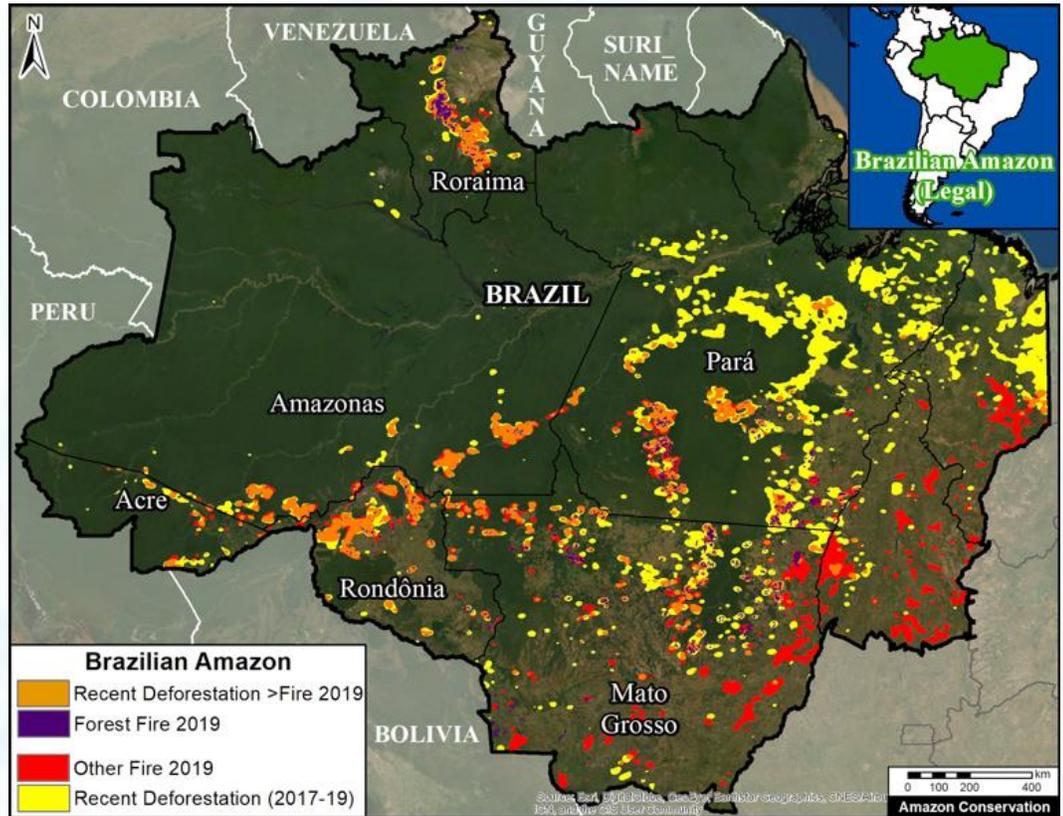
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Furthermore, a new study found that the majority of the fires in the Amazon that grabbed the world's during summer 2019 were on land that had been recently deforested-and then set on fire to clear the land, mostly by cattle ranchers seeking to expand their grazing area. The study found that 1,150 square miles of Amazon forest were cut down and then burned in 2019. (Note that in the map at right, most of the fires of 2019 occurred on recently deforested land, with relatively few starting



“naturally”). What this means is that the Amazon wildfires are not accidental consequences of a warming world, like the wildfires in the American West. They are intentional criminal acts that are part of an ongoing plan to eat into the forest, by a subset of exploitative industry that has been emboldened by an anti-environmental president.

In short, Bolsonaro is, as a journalist once put it, “the most hateful elected official in the democratic world,” and certainly the world leader doing the most environmental damage at the moment. Unlike Donald Trump, Bolsonaro appears to be achieving broad success in his regulatory rollbacks, with the globally vital Amazon rainforest feeling the saw and the flame as a result. Furthermore, there is little state-level environmental action in Brazil as there has been in the US under Trump to endeavor to balance out the damage, and Bolsonaro’s allies control both houses of the Brazilian congress. The one positive is that he may be vulnerable for the next Brazilian presidential election, in 2022, as a recent poll found a plurality of Brazilians (39.5%) rating his presidency so far as “bad” or “terrible.” This writer heartily agrees.

For more on the sugarcane deregulation, see tinyurl.com/wz6vsr8. For more on the oil spill, see tinyurl.com/yx235kh6. For more on the anti-indigenous violence, see tinyurl.com/thwgrp4. For more on the murder of Paulo Paulino Guajajara, see tinyurl.com/vs7bmjw. For more on the deforestation and the deforestation leading to fires, see tinyurl.com/s98aqs9 and tinyurl.com/v49ck64. For more on the poll, see tinyurl.com/y4wzjahy.



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Climate Impacts: Venice, Italy. On Tuesday, November 12th, Venice faced an immense flood. By November 15th, a mind-boggling 70% of the city was flooded by the “acqua alta,” or high waters. Heavy rains and extremely high tides, both likely exacerbated by climate change, combined with Venice’s ongoing subsidence problem (slow sinking of ground level) to produce a flood of massive proportions. The iconic St. Mark’s



Basilica was engulfed by the floods (pictured), smashing windows and completely inundating the crypt, at least two people were killed, and the Italian prime minister declared a state of emergency. In an ironic twist, the council chamber for the Veneto (roughly Greater Venice) region was flooded two minutes after the regional council had voted against bills to address climate change through measures such as funding renewable energy. Venice’s mayor, Luigi Brugnaro, blamed climate change and pledged to move forward on a long-delayed flood barrier project. This kind of unnatural disaster is already becoming a leit-motif of the Anthropocene, with more and more wildfires, floods, droughts and storms in the news every week. For more, see tinyurl.com/uadnecg. For an in-depth look at the interplay between subsidence, sea level rise, and rains, see tinyurl.com/vce6mna.

Climate Impacts: Gulf of Maine. In addition to all the shifts described in our article last week, a new study has found that the warming waters and more frequent and severe storms of the Anthropocene are driving a shift in the seaweed communities of the Gulf of Maine. "These shifts in nature have created a perfect breeding ground for much bushier, or turf, seaweed to take root," said Dr. Jenn Dijkstra of the University of New Hampshire, lead author of the new study. "Our earlier research showed a clear increase in invasive seaweed in areas once dominated by tall blades of kelp, that are important in the protection of sea life, but this new research showed us just how widespread this shift is and the effects the turf seaweed could potentially have on the ecosystem." Dr. Dijkstra and her collects project that the absence of kelp will make it harder for prey fish species to hide, with far-reaching effects on the food web. The turf seaweed is likely to continue to spread, changing the Gulf of Maine still further. For more, see tinyurl.com/rxqd875.



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Australia: Renewable Energy. Despite little to no support from the anti-climate action government of Australian Prime Minister Scott Morrison, renewable energy is spreading rapidly across the Land Down Under. A report released in July found that the amount of clean electricity going to Aussie businesses and households is expected to grow by 36% in 2019 and a further 25% in 2020, and that Australia is, surprisingly, on track for its Paris Accords climate target of meeting 23% of the nation's electricity needs with renewable energy 2020. Then, a new milestone was reached—for ten minutes from 11:50 AM to noon on Wednesday, November 13th, (just after the last edition of this newsletter was sent out) Australia's main electricity grid was powered by 50.2% renewable energy. Over half of the nation's electricity demands were met with renewables, for the first time ever. For that period, the main Australian grid (covering the five states of Queensland, New South Wales, Victoria, Tasmania, and South Australia) was receiving 23.7% of its power from rooftop solar, 15.7% from wind power, 8.8% from large-scale solar, and 1.9% from hydro (the remainder, sadly, still dominated by coal). The spike was temporary, and the average renewable percentage for the day was “only” a still-impressive 31.2%, but this shows that the Australian domestic energy landscape is moving the right direction. If only they would stop digging up coal for export, Oz would be a world leader in the fight against climate change. Great news! For more, see tinyurl.com/y49dkb8k and tinyurl.com/y49dkb8k.

Australia: Ecosystem Governance. On Australia's remote northern Dampier Peninsula, a partnership between ecologists from the Kimberly Nature Project NGO and rangers from the Nyul Nyul, Bardi Jawi, and Yawuru local indigenous peoples is protecting a rare and unique ecosystem. Monsoon vine thickets cover only 0.01% of the Dampier Peninsula, but are home to a quarter of its plant species, with the patches sustained and connected by fruit-dispersing species such as the rose-crowned fruit dove (pictured) and little red flying foxes. Monsoon vine thickets are home to amazing plant and animal species, from the great bowerbird and the northern brush-tailed possum to the helicopter tree, the snowball bush, and the cable beach ghost gum. The alliance is working to protect the monsoon vine thicket ecosystem through practices such as propagating and planting native plant species, removing over-abundant nonnative species, and, crucially, traditional fire management practices, setting carefully controlled burns to reduce the dry fuel stock available for damaging wildfires. This is a spectacular example of uniting the best of western science and traditional ecological knowledge to protect a wondrous ecosystem! For more, see tinyurl.com/vjygvnt.

