

Will Brazil's President Lula wake up to the climate crisis? (commentary)



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<u>Amazon</u>

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- The global climate system is even nearer than we thought to a tipping point where global warming escapes from human control. Emissions from both fossil fuel combustion and the loss and degradation of forests must be drastically reduced, beginning immediately.
- Brazil would be one of the greatest victims if global warming escapes from control, but, excepting the Ministry of Environment and Climate change, virtually the entire Brazilian government is promoting projects that will increase emissions for decades to come.
- Brazil's President Lula so far shows no signs of waking up to the climate crisis, to its implications for Brazil, and to the climatic consequences of his current policies.

 This article is a commentary. The views expressed are those of the author, not necessarily Mongabay.

The situation is worse than previously thought

In February 2025, three scientific papers were published showing that the climate situation is much worse than the scientific community thought, much less what is thought by the people to whom President Luiz Inácio Lula da Silva (known simply as "Lula") really listens – his Minister of Mines and Energy and the President of the government oil company (Petrobras). The first paper, published in the journal Environment: Science and Policy for Sustainable Development on February 3, is led by the renowned climate scientist James Hansen. It shows that the effect of aerosols and other forms of atmospheric pollution have masked the real power of greenhouse gases already present in the atmosphere, and that the rate of warming in the coming years would be much greater than previously thought.

This means that the climate is rapidly advancing towards a point of no return, where global warming would escape the possibility of human control. Hansen, who is famous for being the NASA scientist who challenged the climate denialism of then-US President George W. Bush, made a statement to the press at the time of the release of the current paper that the goal of keeping the global average temperature below 2°C (3.6°F) above the pre-industrial average is "dead." If true, it is very serious, since even the current limit in the Paris agreement of 1.5°C (2.7°F) implies a substantial risk of warming escaping from control (see here and here and here), as well as of the Amazon rainforest collapsing. But we should not be fatalistic, which only makes a global catastrophe self-fulfilling.

The other two papers were published in the journal *Nature Climate Change* on February 10. Two independent groups, using different methods, showed that the record temperature of 2024, with every month more than 1.5°C above the preindustrial average, is highly likely to continue, and is not a temporary spike due to the El Niño cycle, sunspots, etc. (available here and here). Like the work of Hansen and colleagues, these papers are open access. The Intergovernmental Panel on Climate Change (IPCC) has argued that it would need a 20-year data series to be able to state that the average temperature had passed a threshold of 1.5°C or 2°C, but the two papers that have just been published show that this is not the case. Of course, we do not have 20 years to account for the crossing of these thresholds and take the necessary measures because by then climate change would be out of control.



Fire on the banks of the drought-stricken Xingu River in the Capoto-Jarina Indigenous Territory on September 12th, 2024. Photo © Marizilda Cruppe / Greenpeace.

What would happen in Brazil if warming gets out of control?

Brazil would be one of the greatest victims if warming got out of control. The Amazon rainforest, which is already very close to collapse, would be lost (see here and here). Losing the Amazon Forest also means that Brazil would lose the transport of water vapor by the winds known as "flying rivers" that is essential to maintaining the city of São Paulo, as well as agricultural production, both for family agriculture and for agribusiness. Brazil is already on the verge of losing its great asset of obtaining two crops per year from each hectare of soybeans (see here and here, and pivot irrigation fed by groundwater aquifers could not save the situation, as shown by the recent discovery that the Matopiba region (Maranhão, Tocantins, Piauí, Bahia) is already rapidly depleting this reserve.

The frequency of major droughts in Brazil would increase to be <u>more than ten</u> <u>times</u> the historical frequency. The northeast region would become a desert, with areas currently considered "semiarid" becoming "arid," <u>a process</u> that is <u>already underway</u>. The large Brazilian population living along the country's coast would be exposed to <u>rising sea levels</u> along with an increase in <u>major typhoons</u>. Climate "surprises" not predicted by climate models, such as the <u>flooding in Rio Grande do Sul</u> in 2024 and the <u>flooding in the Madeira River</u> in 2014, would become more frequent, <u>as predicted</u> by the great climate scientist Steven Schneider.

The heat waves currently affecting Rio de Janeiro are striking, with temperatures reaching 44°C (111.2°F) and an <u>apparent temperature</u> (also known as "feels like") of 50°C (122.0°F) due to high humidity. If global warming gets out of control, the temperature peaks would be much higher. Heat waves are <u>already increasing</u> mortality in Rio de Janeiro, as demonstrated by <u>a study</u> released on February 14th.

The human body has a temperature of 37°C (98.6°F), but we can withstand heat a few degrees higher for some time thanks to the cooling effect of evaporating sweat. When air humidity is high, this cooling mechanism is less effective. Elderly people and young children are the most vulnerable to excessive heat, but even the temperatures in the current heat waves in Rio de Janeiro pose risks for more resistant age groups, as demonstrated during one of Rio's heat waves in 2023 when the apparent temperature reached 60°C (140°F) causing a 23-year-old fan to die while waiting for a Taylor Swift concert, which was then cancelled.

Temperature and humidity projections indicate large areas of the country becoming uninhabitable, with temperatures in dry conditions exceeding 35°C (95°F) including the Amazon, São Paulo and Rio de Janeiro (see here and here and here). Mass mortality would be a predictable consequence. It should be obvious that it is irresponsible for any president of Brazil to promote policies that increase the risk of this type of consequence.

Above a <u>certain temperature</u> the use of fans becomes counterproductive, raising instead of lowering body temperature. The US Center for Disease Control and Prevention (CDC) considers this limit to be <u>32.2°C (90°F)</u>, while World Health Organization (WHO) considers it to be <u>40°C (104°F)</u>. <u>Millions of deaths</u> from excess heat are expected in this century even in places like <u>Europe</u>, where a higher percentage of the population can afford air conditioning than in Brazil.

Aside from the many other impacts in Brazil should global warming escape from control, the specter of mass mortality and of much of Brazil becoming "uninhabitable" should, by itself, convince President Lula to change his policies that are contributing to this risk. He continues to promote projects to open new oilfields both offshore (including in the mouth of the Amazon) and in the Amazon Forest (including in the vital Trans-Purus region), and to promote projects that drive deforestation, such as legalizing land claims in government land and opening vast areas of forest with highways like BR-319 and associated side roads. So far, the needed awakening to the climate crisis and to the role of his policies in it has not yet occurred.

This article is an updated translation of a text by the author that is available in Portuguese on Amazônia Real.

Header image: Burned forest along the drought-stricken Xingu River. Photo © Marizilda Cruppe / Greenpeace.