

# MAYA

The Voice For Environmental And Climate Justice



## DEMANDING

ENVIRONMENTAL AND CLIMATE JUSTICE IN OUR LIFETIME.

# BULLETIN

2<sup>nd</sup> Issue

JULY 2020



## MAYA BACKGROUND

The Manica Youth Assembly (MAYA) seeks to organise and empower ordinary youth to actively and consciously participate in public affairs and proffer solutions. It is non-profit-making, non-partisan and solution-centred.

MAYA was established in 2018 by youth who had come to understand the effects of the wanton destruction of the environment and the effects of climate change on the Earth and upon society, and who had come to realise that it is the young people of today who will bear the effects of climate change in the future.

MAYA will capacitate young people to protect and improve the environment through creative and sustainable initiatives.

MAYA exists to create a popular and political will to introduce climate and environmental solutions for the greater good of society.



**WHERE ARE THE TREES?  
DEGRADED LAND IN MUTARE**

# LOCKDOWN !!

## No Respite for Environment in Mutare

by Jussa Khuderezera  
Director of MAYA



Zimbabwe like many countries has been under a Covid-19 lockdown as the nations of the world scramble for a solution — which has so far proved elusive.

The last 45 days have sent Mutare into a deep slumber as people have been forced to stay home. Economic activity has been at a near stand-still making access to basic necessities difficult thus leading to increased poverty levels. Citizens are grappling with the invisible enemy which has closed down the city, country and world at large. This is unprecedented in recent history.

New challenges have arisen, especially in the area of energy. Electricity and LPG (Liquefied Petroleum Gas) prices have shot up forcing people to seek for alternative cheaper sources of energy. The insanely expensive electricity charges introduced by ZESA (Zimbabwe Electricity Supply Authority) which have increased electricity charges from 46c. per kW to \$5 per kW has been one of the biggest factors leading to this.

Without money to purchase more electricity or gas, the natural solution for most residents has been to resort to firewood. With most men at home, people have found been scouring the surrounding forest areas such as Fern Valley, Arda, Lower Vumba and the mountains surrounding the city, cutting down trees for firewood. They do not only search for firewood in the forest but they also engage in poaching, snaring and killing wildlife to supplement their food supply.

Mutare used to boast that it was the ‘greenest city’ in Zimbabwe, but has been losing the tag for some time now, especially during the lockdown as armies of residents have cut down trees for firewood. Municipal rangers and other law enforcement agents have lost the battle as they lack capacity to effectively deal with this problem. They have become bystanders.

As hunger increases, many families are resorting to urban agriculture and have added to the problem by cutting down trees to clear land for agricultural purposes. Thus in a very short space of time Covid-19 has induced massive cutting down of trees, not only for domestic use, but also as they clear land for agricultural purposes.

During this period, no trees have been planted and the smoke from wood fires has increased carbon emissions into the atmosphere.

The Manica Youth Assembly would like to encourage the city fathers and land developers to plant trees in all new residential areas and also to re-tree the Chimanmani road which has become as barren. There is also need to deploy more rangers to monitor the cutting down of trees and this should be backed up by a public education campaign in order to arrest the problem.

MAYA is ready to join hands with progressive and like-minded stakeholders to play a positive role in urgently dealing with the problem or else the city and its people are condemned into a continuing downward spiral into both poverty and degradation of their surroundings.

# World Environment Day 2020



On 5<sup>th</sup> June 2020 the Manica Youth Assembly celebrated World Environment Day. This day was set aside in 1974 by the United Nations to foster empathy and create solidarity with the environment among people and nations. It is one of the principal vehicle through which the UN stimulates global environmental awareness, calling for political attention and action.

This year's theme was 'Celebrate Biodiversity'. MAYA joined the rest of the world in commemorating this very important day, reminding all that we must critically reflect on the unfortunate truth that biodiversity and life on the planet earth itself are under serious attack from us, human beings; over a million species are now threat of extinction and in recent years, many others have already become extinct.

The theme reminds us that all organisms, large or small, seen and unseen, aquatic, land and aerial are equally important and are all part of the biodiversity which keeps our planet healthy.

As people, human beings, we are only part of the ecosystem and cannot survive in isolation. Events around the world that include the roaring global Covid-19 pandemic that has shut off the global economy, bushfires in Brazil, the United States, and Australia, locust infestations across East Africa, droughts and cyclones in Southern Africa demonstrate the interdependence of humans with other species in the web of nature in which they exist. If one species is removed, the balance is lost. This is the importance of biodiversity.

That human beings are responsible for the dire condition of life on the planet is a proven and undeniable fact and it the same humans who can and must take corrective action. If we do not, then there is no future for our children and grandchildren. The human species will perish along with many others.

Human actions fed by population increase and an unending thirst for resources has caused deforestation, encroachment on wildlife habitats, intensified agriculture, mining and continuous destructive war have escalated effects of climate change pushing nature beyond its limit. It would require a second Earth to meet the insatiable demands that humans make of nature each year.

The loss of biodiversity can have severe implications for humanity, including the collapse of food and health and other systems that sustain our life here on Earth.

At this critical juncture, MAYA encourages all governments to show political will by ratifying the Paris Agreement and to take all necessary steps to mitigate the emissions of greenhouse and other carbon gases. There is only one Earth for us all.

We can only upset biodiversity at our own peril and we are herewith called to action now. We cannot wait another minute.





## MAYA STATEMENT

The Manica Youth Assembly appreciates the importance of biodiversity. Environment is a global pre-requisite for the enjoyment of human rights. The environment must be seen as God's gift to all people, and the use we make of it entails a shared responsibility for all humanity. We have to preserve it for future generations.

A proper education which relates humankind to the natural world in which we live is therefore an important vehicle in our fight to preserve the environment and reverse climate change. we have to fight climate change.

A proper education provides children and young people with the skills and knowledge they need to create a better tomorrow.

MAYA intends to capacitate the youth in demanding social, political, environmental and climate accountability from office bearers and stake holders.

MAYA intends to motivate young people to defend, promote, protect and serve humanity and the environment through the use of creative, innovative and sustainable solutions.





The Manica Youth Assembly is shocked at the alarming rate at which plastic bottles are being dumped at the First Class Footbridge in Sakubva, Mutare.

This has been going on during the period in which we have been celebrating World Environment Day and biodiversity!

Plastic bottles do not easily decompose and by this careless behaviour we are polluting the water sources used for our own consumption as well as harming aquatic life.

MAYA exhorts all citizens to unite and combine efforts in their respective communities to collect these plastic bottles and find proper channels for disposing them, in particular by engaging the companies that embark on recycling and waste management.







## DAY OF THE AFRICAN CHILD 16<sup>th</sup> JUNE 2020



The Manica Youth Assembly commemorated 16<sup>th</sup> June, the Day of the African Child during the COVID-19 Lockdown, observing social distancing.

It is a day in which we commemorate the refusal of the youth of Soweto to be taught in Afrikaans, the language of the oppressor. This specific problem highlighted the injustice of the evil apartheid system and ushered in a new phase in the struggle for the attainment of freedom, peace and justice for all in South Africa and gained resonance across the whole continent of Africa.

But the ending of direct racist rule has not ended oppression and in Africa. Youth on our continent continues to suffer injustice and inequality. In particular, girls in rural areas, often ignorant of their rights, are frequently subject to inequalities in education, poor access to menstrual health, sexual abuse and child marriage.

MAYA fully endorses the theme ‘Access to Child-Friendly Justice System in Africa’ as adopted by the African Union Executive Council, during its 34<sup>th</sup> Ordinary Session held in 2019.

It is not far-fetched to say that today, years after all African countries attained political independence, the children of Africa frequently face the same and sometimes worse challenges than Soweto martyr, Hector Pieterse and peers faced in 1976.

Surely their deaths cannot have been in vain.

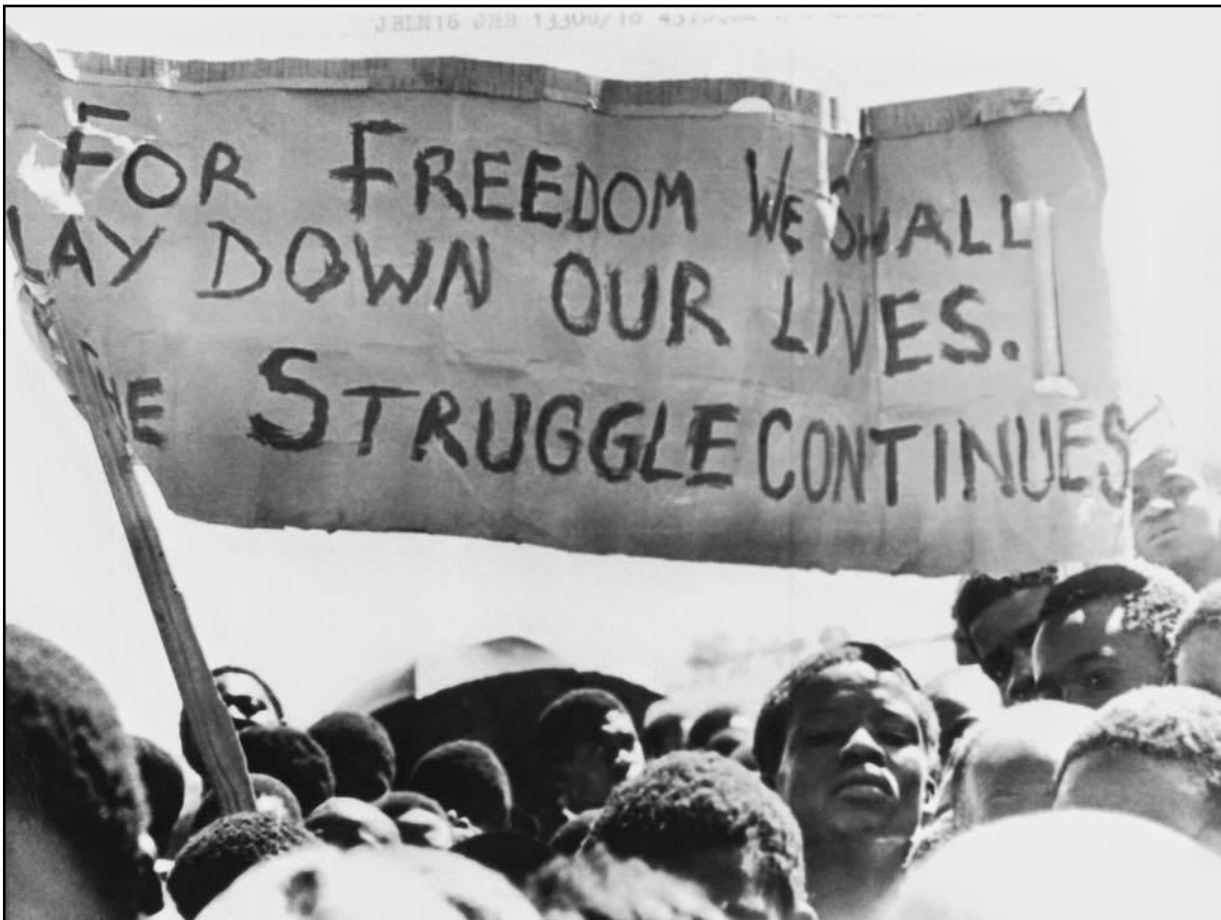
**Justice for the African Child !!**



## LEST WE FORGET



Soweto 16<sup>th</sup> June 1976



# TYPHOID OUTBREAK IN BULAWAYO

*Bulawayo has long prided itself on its excellent soft water flowing from granite rock. Even though due to occasional drought normal water supplies have sometimes dried up, borehole pumps have always been available in most parts of the city when those times occur. Unlike Harare and Chitungwiza which have not had safe water for many years, the people of Bulawayo have never had to consider boiling water before they drink it. Now times have changed for the worse. The Bulawayo Progressive Residents' Association (BPRA) has been battling with a negligent City Council.*

**Report by: Vusumuzi Dube/Ngqele Dube**

**28<sup>th</sup> JUNE 2020**

**ACKNOWLEDGEMENTS TO: SUNDAY NEWS, BULAWAYO**

TESTS done at private laboratories to ascertain the cause of 12 deaths and illness to more than 1,500 residents of Luveve in Bulawayo have revealed that they suffered from typhoid and dysentery.

The revelations come after the city council last week said patients suffered from gastrointestinal diseases. Gastrointestinal disease is a broad term that refers to diseases involving the gastrointestinal tract, namely the oesophagus, stomach, small intestine, large intestine and rectum, and the accessory organs of digestion, the liver, gallbladder, and pancreas.

Residents have already filed an urgent chamber application at the High Court compelling council to release key information relating to the outbreak and further allow residents to engage independent experts to assess the situation. City Health Director Dr Edwin Sibanda said stool tests that were done at a Cimas laboratory came out positive for salmonella typhi, the bacteria that causes typhoid and shigella which causes dysentery.

He said council initially did random sampling of testing one in five cases but as the number of cases grew, they resorted to only collecting one in 20 infected people. Dr Sibanda said it would be difficult to pinpoint the exact source of the disease as water tests also done at the same laboratory did not have any traces of the two bacteria.

“We had tests done at a Cimas lab and National University of Science and Technology for both water quality and rectal swabs. While the stool samples came out positive for salmonella typhi and shigella, the six water samples from various sources that include tap water, home containers, wells and streams came out negative. The patients were exhibiting different symptoms with some vomiting while others had bloody diarrhoea,” he said.

Dr Sibanda said with the source yet to be pinpointed it was critical for people to wash hands frequently with soap to reduce chances of infection.

“The two diseases have different incubation periods, with shigella’s being 12-96 hours while salmonella typhi is between eight to 14 days. A person could have been infected elsewhere only to show symptoms here and start spreading the disease. Again, maybe the water source could have been infected before we tested and then the bacteria were washed out by the time we were doing tests,” said Dr Sibanda.

Meanwhile, Bulawayo residents under the Bulawayo Progressive Residents Association (BPRA) have filed an urgent chamber application compelling the local authority to release key information relating to the outbreak. The residents in their application note that the information is vital as they intend on embarking on a class action civil suit against the local authority, alleging that further delays in the release of the information will result in the local authority concealing key evidence. According to court papers the application is set to be heard at the High Court tomorrow.

The residents, through BPRA co-ordinator, Mr Emmanuel Ndlovu and Mr Chrispen Ngulube, a Luveve resident who is among those that have been affected by the outbreak, also seek to have an independent expert appointed to collect samples of the water and pipe system to determine the cause of the outbreak.

The residents accuse BCC of attempting to cover their tracks by embarking on a rushed exercise to lay new polyvinyl chloride (PVC) water pipes in Luveve hence their request to have the court grant them access to take samples at the old pipes.

“Most residents reported falling ill after drinking tap water provided by the respondent. Without exception, all affected residents collected, and most used the water after one of the regulation five days of water cuts imposed on most of the city by the respondent. Most people began falling sick two days after the return, as it were, of the water.

“They reported that the water, when pumped from the tape, was discoloured, with particles of solid matter, greyish brownish, dark green in colour. Residents also reported that the water was odoriferous with a suggestion of raw sewer in the odour,” reads part of the application. BPRA further accused the local authority of denying responsibility for the outbreak, declaring instead that their water was satisfactory, with the city’s Mayor, Councillor Solomon Mguni announcing that they had found bacterial presence in containers some residents used to store water.

“The respondent did not reveal to the public the nature of the bacteria found in the water and did not particularise what standards were used to pass the tap water as satisfactory. The respondent has reported repeatedly that it tested water held by residents and found bacterial presence. The respondent has not disclosed what bacteria was found in this potted water.

“The diagnosis published by the Mayor, according to advice from medical personnel advising our legal team, and according to internet sources simply points to some other underlying problems of bacterial infection in the affected patients. It seems to be a life-threatening condition resulting from some bacterial infection,” reads the application.

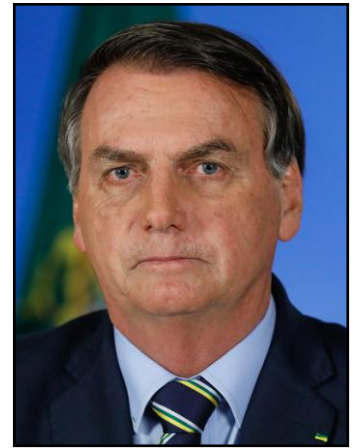
The residents justify the urgency of the matter, adding the local authority may destroy or conceal the evidence relating to their responsibility of the outbreak.

“Further the Applicant requests urgent access to the routine plumbing maintenance schedule for any part of Luveve for the past six months. It is our belief that the respondent carries out, or should, routine maintenance and inspection of its water infrastructure. The application is made without notice on the grounds of fear of adverse action by the respondent. I verily entertain a fear that the respondent will destroy or conceal the evidence. The fear arises out of the combative and denialist attitude that has been exhibited by the respondent thus far. The respondent may conceal or do away with evidence to perpetuate its denial,” reads the application.

## BRAZIL AND THE AMAZON RAIN FOREST

*More than half the remaining rainforest in the world is in the Amazon basin of South America. It covers parts of 9 countries altogether, but 60% of it is in Brazil. It is the lungs of the planet absorbing huge quantities of carbon dioxide and supporting incredible biodiversity.*

*But the current extreme right-wing government of Brazil led by President Jair Bolsonaro and which came to power in January 2019 has reversed all the policies of the Workers Party of Brazil, led from 2003 by President Lula da Silva and his successor Dilma Rousseff which brought in many reforms and which managed to slow up and partially control the destruction of the rainforest by the powerful group of extremely rich people who continued to control most of the economy.*



**PRESIDENT BOLSONARO  
OF BRAZIL  
DENIES CLIMATE CHANGE**

*Bolsonaro is a strong supporter of Donald Trump and like Trump denies that climate change is really happening.*

## EXPERTS BLAME BOLSONARO FOR SURGE IN DEFORESTATION, WARN OF WORSE TO COME

by Liz Kimbrough

25<sup>th</sup> NOVEMBER 2019

**ACKNOWLEDGEMENTS TO THE MONGABAY WEBSITE**

- *Between August 2018 and July 2019, an area of 9,762 square kilometers (3,769 square miles) of primary forest was cleared, according to data released by the Brazilian National Institute of Space Research (INPE) last week.*
- *The area, roughly the size of Hawaii's Big Island, represents the highest deforestation rate in 11 years.*
- *Experts contacted for this story told Mongabay that the 30 percent surge of forest loss over the past year could be even higher for the coming months amid lack of enforcement and large cleared areas preceding fires in August and September 2019.*
- *The spike in deforestation is a direct result of the actions of President Jair Bolsonaro, who has been dismantling environmental agencies and environmental legislation to pave the way to open up Amazon protected areas to agribusiness and mining, experts said.*

The highest rate of destruction of the Brazilian Amazon in over a decade is likely to worsen through the term of President Jair Bolsonaro if effective measures to halt deforestation don't come into force, experts warn.

Between August 2018 and July 2019, a combined area of 9,762 square kilometers (3,769 square miles) of primary forest, roughly the size of Hawaii's Big Island, was razed, according to data disclosed by the Brazilian National Institute of Space Research (INPE) last week.

Experts contacted for this story told Mongabay that the 30 percent surge of forest loss over the past year could be even higher for the coming months amid lack of enforcement and large cleared areas preceding the massive fires of August and September 2019.

“We are now in the new deforestation season which started in August 2019. In the first months of the new season, we are seeing even more deforestation than in the same period of the last season,” Carlos Souza Jr., a senior researcher at Imazon, a conservation nonprofit organisation, told Mongabay. “If the federal government continues in the same way, there will be even more deforestation in this current season.”

The Bolsonaro government has been highly criticized for its role in deforestation and forest destruction. While annual deforestation has increased over the past 11 years, the spike seen in 2019 is, according to many experts, a direct result of the government’s actions.

“The surge [in deforestation] is definitely a result of both President Bolsonaro’s rhetoric and his concrete actions in dismantling IBAMA [Brazil’s environment agency],” Philip Fearnside, an ecologist at the National Institute for Research in Amazonia (INPA), told Mongabay. Fearnside has dubbed this “the Bolsonaro effect.”

The damaging actions of the current government have been examined both by academics and the media. Some of these actions include weakening Brazil’s forest codes and environmental agencies, reducing protected areas, approving dangerous agrochemicals, overlooking and pardoning deforestation offenses, and denying climate change.

“What’s so disheartening about Bolsonaro is that he’s tearing apart laws and environmental safeguards that have taken many years to create,” said William Laurance, a tropical ecologist at Australia’s James Cook University and a member of Mongabay’s advisory board. “The damage Bolsonaro is doing will last long beyond his tenure as president, as the demons he’s releasing are notoriously hard to control.”

The Ministry of Environment did not reply to requests for comment.



**PRESIDENT JAIR BOLSONARO HAS DISMANTLED IBAMA, BRAZIL’S ENVIRONMENT AGENCY**

## Why is deforestation increasing?

Deforestation rates had been higher in the past — 27,000 square kilometers in 2004, and 29,000 square kilometers in 1995 — but these peaks of deforestation were closely linked to an expansion of the economy driven by a commodity boom, said Cláudio Almeida, a senior technologist at INPE.

“The current increase has much lower absolute values. However, it is concerning that even in an economically difficult environment deforestation is on a steady upward trend for about seven years,” Almeida said.

The increased pace of deforestation, said Souza, is alarming because soon more than 20 percent of the forest will be lost: “If we continue to lose forest at this pace, we may reach the forest dieback tipping point faster.”

Carlos Nobre, a senior researcher at the University of São Paulo’s Institute for Advanced Studies and a noted expert on the Amazon and climate change, expressed similar concerns.

“The implications [of this data] are far reaching,” Nobre said. “Most worrying is the fact that a synergistic combination of deforestation, global warming and increased vulnerability of the forest to fires may drive 50 percent to 60 percent of the forest past a tipping point of savannization.”

In this scenario, large areas of the Amazon would dry out and change from tropical rainforest to savanna. There is already evidence that the Amazon Basin is drying out faster than climate models have predicted. In the southern and eastern Amazon, the dry season is becoming longer, drier and warmer.

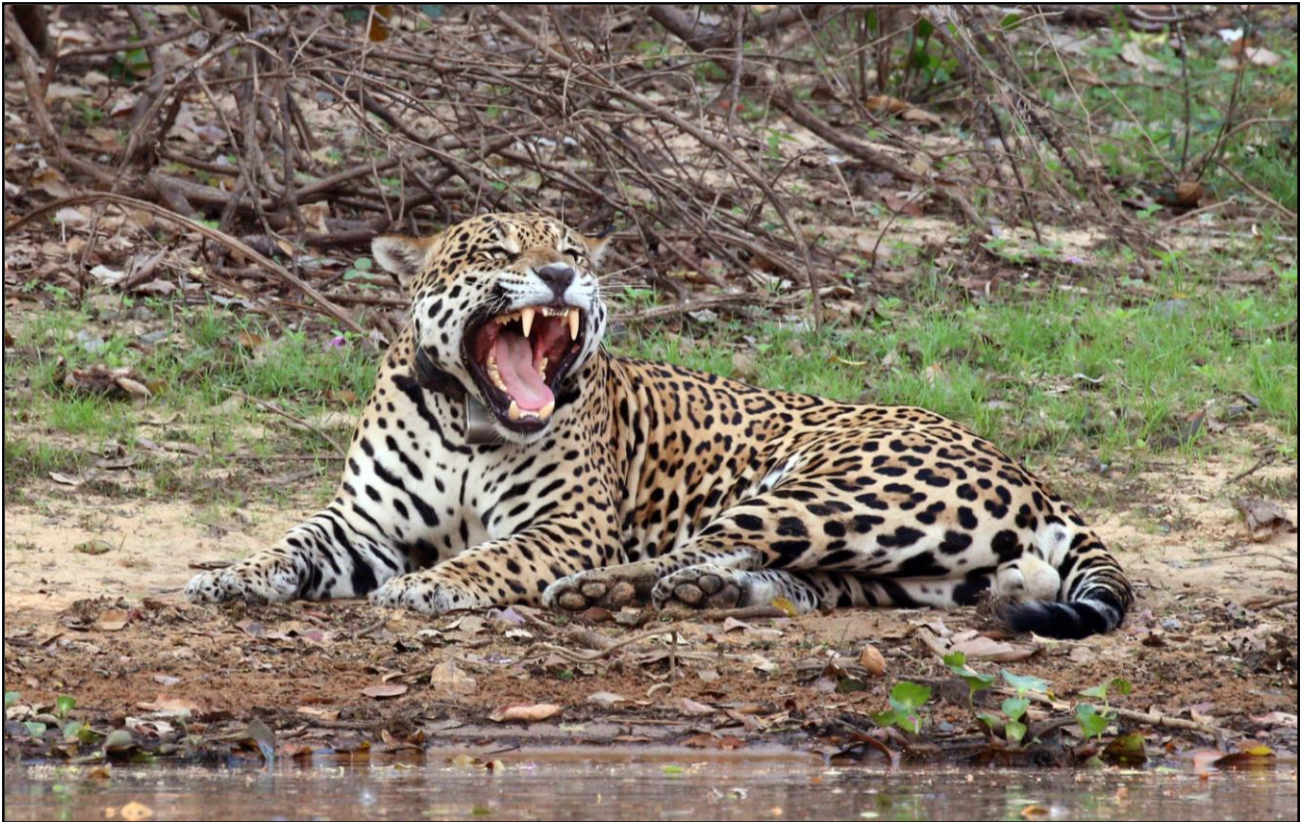
“If duration of the dry season exceeds four months,” Nobre said, “[the Amazon] will turn into a dry tropical savanna. The impact will be huge, resulting in the release of over 200 billion tons of CO<sub>2</sub>, tremendous loss of biodiversity and impacts on rainfall systems in distant locations in South America.”

Nobre said that areas such as river floodplains, where trees can access groundwater year-round, may retain forests, creating forest fragments. However, these fragments may be insufficient to support the wildlife that live in the Amazon, including animals such as jaguars and primates, which need large areas of connected land to thrive.

## What can be done?

The biggest obstacle to reducing deforestation, according to Souza, is the lack of actions to implement measures to control deforestation. “Brazil knows how to do that, and had successfully reduced deforestation,” Souza said, referring to an action plan for the prevention and control of deforestation in the Legal Amazon, the region encompassing Brazil’s nine Amazonian states. Known as PPCDAM, this plan addressed land tenure and territorial planning, environmental monitoring and control, and fostering sustainable production, according to Souza.

“What I believe,” Almeida said, “is that making deforestation rates fall again will require strong enforcement and oversight with the presence of the state, while society needs to renegotiate sustainable production measures, such as the moratorium on production only in areas deforested before the forest code.”



**A MALE JAGUAR (A CLOSE RELATIVE OF THE AFRICAN LEOPARD) ON THE BANKS OF THE RIO NEGRO IN BRAZIL  
NOTE THAT IT HAS A TRACKING DEVICE AROUND ITS NECK. LIKE OTHER SPECIES, THE JAGUAR IS LOSING HABITAT**

Brazilian beef, soya beans and mineral imports by countries and companies also continue to drive deforestation. If companies rigorously worked toward a deforestation-free supply, Nobre said, deforestation could be drastically reduced in as little as five years. However, unless there are rapid and systemic changes in supply chains and effective law enforcement action, Nobre said, “it is likely that deforestation in 2019-2020 will be out of control.”



**AMAZON RIVER DOLPHIN**



# UNDER BRAZIL'S FAR-RIGHT LEADER, AMAZON PROTECTION SLASHED AND FORESTS FALL

by Leticia Casado and Ernesto Londoño

28<sup>th</sup> JULY 2019

ACKNOWLEDGEMENTS TO THE *NEW YORK TIMES*

The destruction of the Amazon rain forest in Brazil has increased rapidly since the nation's new far-right president took over and his government scaled back efforts to fight illegal logging, ranching and mining.

Protecting the Amazon was at the heart of Brazil's environmental policy for much of the past two decades. At one point, Brazil's success in slowing the deforestation rate made it an international example of conservation and the effort to fight climate change. But with the election of President Jair Bolsonaro, a populist who has been fined personally for violating environmental regulations, Brazil has changed course substantially, retreating from the efforts it once made to slow global warming by preserving the world's largest rain forest.

While campaigning for president last year, Mr. Bolsonaro declared that Brazil's vast protected lands were an obstacle to economic growth and promised to open them up to commercial exploitation.

Seven months into his term, that is already happening.

Brazil's part of the Amazon has lost more than 1,330 square miles of forest cover since Mr. Bolsonaro took office in January, a 39 percent increase over the same period last year, according to the government agency that tracks deforestation. In June alone, when the cooler, drier season began and cutting trees became easier, the deforestation rate rose drastically, with roughly 80 percent more forest cover lost than in June of last year.

The deforestation of the Amazon is spiking as Mr. Bolsonaro's government pulls back on enforcement measures like fines, warnings and the seizure or destruction of illegal equipment in protected areas.

A New York Times analysis of public records found that such enforcement actions by Brazil's main environmental agency fell by 20 percent during the first six months of the year, compared with the same period in 2018. The drop means that vast stretches of the rain forest can be torn down with less resistance from the nation's authorities.

The two trends — the increase in deforestation and the government's increasing reluctance to confront illegal activity — is alarming researchers, environmentalists and former officials who contend that Mr. Bolsonaro's tenure could lead to staggering losses of one of the world's most important resources.

"We're facing the risk of runaway deforestation in the Amazon," eight former environment ministers in Brazil wrote in a joint letter in May, arguing that Brazil needed to strengthen its environmental protection measures, not weaken them.

Mr. Bolsonaro has dismissed the new data on deforestation, calling his own government's figures "lies" — an assertion experts called baseless. During a gathering with international journalists last week, the president called the preoccupation with the Amazon a form of "environmental psychosis" and argued that its use should not concern outsiders.

"The Amazon is ours, not yours," he told a European journalist.

The Bolsonaro government's stance has drawn sharp criticism from European leaders, injecting an irritant to a trade deal struck last month between the European Union and a bloc of four South American countries, including Brazil.

During a recent visit, Germany's minister of economic cooperation and development, Gerd Müller, called protecting the Amazon a global imperative, especially given the rain forest's vital role in absorbing and storing carbon dioxide, essential to the effort to slow global warming. And when trees are cut, burned or bulldozed, carbon dioxide goes directly back into the atmosphere.

Germany and Norway help finance a \$1.3 billion Amazon conservation fund, but the Bolsonaro administration has questioned its effectiveness, raising the possibility that the effort could be shut down.

"Without tropical rain forests, there's no solving the climate" issue, Mr. Müller said during an event in São Paulo.

During the campaign, Mr. Bolsonaro promised to do away with the ministry of the environment altogether. He ultimately scrapped the plan under pressure from the nation's agriculture sector, which feared the move would incite a boycott of Brazilian products.

A few weeks before his inauguration, Brazil abruptly pulled out of its commitment to host a global summit on climate change. Then, once he took office, Mr. Bolsonaro's administration cut the main environmental agency's budget by 24 percent, part of a broader cost savings across the government.

He has denounced environmental fines as an "industry" that needs to be shut down. And his administration has said it plans to weaken the authority of environmental protection agents to burn vehicles and other equipment belonging to loggers and miners in protected areas.

Mr. Bolsonaro has brushed off international criticism of his positions, arguing that calls to preserve large parts of Brazil are part of a global plot to hamper his country's development. This month, he accused European leaders of pushing for stronger conservation of the Amazon because they hope to develop it themselves in the future.

"Brazil is like a virgin that every pervert from the outside lusts for," he said.

Brazil had previously tried to portray itself as a leader in protecting the Amazon and fighting global warming. Between 2004 and 2012, the country created new conservation areas, increased monitoring and took away government credits from rural producers who were caught razing protected areas. This brought deforestation to the lowest level since record-keeping began.

But it has suffered setbacks before. As the economy plunged into a recession in 2014, the country became more reliant on the agricultural commodities it produces — beef and soy, which are drivers of deforestation — and on the powerful rural lobby. Land clearing began to tick upward again.

Mr. Bolsonaro has promised to do away with the remaining barriers to developing protected lands. He has also spoken derisively about the environmental agency's enforcement work, which he has experienced firsthand.

On Jan. 25, 2012, environmental agents intercepted a small fishing boat in an ecological reserve in Rio de Janeiro state that Mr. Bolsonaro, then a federal lawmaker, was aboard. He argued with the agents for about an hour and ignored their demands that he leave, said José Augusto Morelli, the agent in charge of the team.

Mr. Bolsonaro refused to identify himself, Mr. Morelli said. But the agent took a photo of Mr. Bolsonaro, who was wearing white Speedo-like bathing suit.

Mr. Bolsonaro never paid the fine, which was rescinded shortly after he was sworn in as president in January. In late March, Mr. Morelli was demoted, a decision he sees as a form of retaliation for the 2012 fine.

Mr. Bolsonaro's refusal to pay the fine is common. All but about 5 percent of environmental fines in Brazil are contested in court, a process that often drags on for several years.

Now Mr. Bolsonaro's environment minister, Ricardo Salles, wants to create a mechanism that would give a government panel the discretion to lower or suspend environmental penalties, worrying former officials who say it would weaken enforcement even further.

Mr. Salles, who did not respond to several requests for an interview, has acknowledged the shortcomings of the environmental enforcement agencies tasked with policing commercial activity in protected areas. But he has argued that the system had been hollowed out by previous governments.

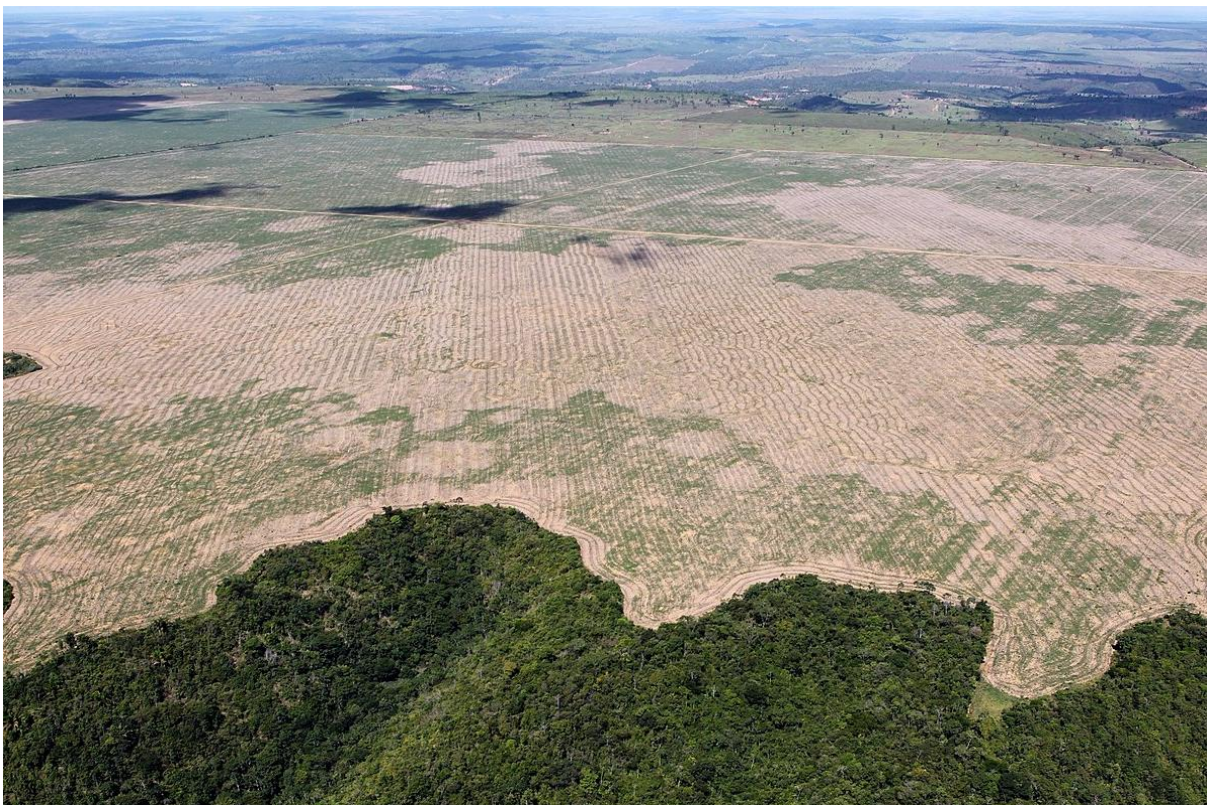
As for the environment, Mr. Salles has said that the government is prioritizing urban problems, like upgrading waste management and sewage treatment systems, which he said were in a "shameful" state.

Other senior officials in Mr. Bolsonaro's government have responded to the sharp rise in deforestation with a mix of denial and defensiveness.

Taking a different approach, Mr. Bolsonaro's chief of staff, Onyx Lorenzoni, took aim at what he called attempts from abroad to shape Brazil's environmental policy.

"We're not naïve," Mr. Lorenzoni said. "There's a view out in the world, sponsored by nongovernmental organizations, that relativizes Brazil's sovereignty over the Amazon."

But, he warned in a recent meeting with reporters: "Here's a little message: 'Don't play around with us.'"



**DEFORESTATION OF THE AMAZON**

# A DEVASTATING DROUGHT IN SOUTH AMERICA WAS CAUSED BY AN UNUSUAL WAVE HALFWAY AROUND THE WORLD

*The backward and ignorant policies of the Brazilian oligarchs who have been destroying the Amazon Rainforest have rebounded terribly creating the worst-ever recorded drought in South America.*

by Joe McCarthy and Erica Sanchez

9<sup>th</sup> JULY 2019

**ACKNOELEDGEMENTS TO GLOBAL CITIZEN WEBSITE**

A devastating drought in eastern South America a few years ago caused catastrophic water shortages in parts of Brazil, disruptions in coffee and soy production, and a surge in mosquito-borne diseases.

Now, a team of researchers traced the drought to an unusual wave originating thousands of miles away in the Indian Ocean. Their research, published in the journal *Nature Geoscience*, shows how massive chain reactions can alter the planet's climate system and warns against the growing consequences of climate change. Through their forensic analysis, the researchers hope that countries can better predict and prepare for future droughts.

“The whole story, it’s all tied up to a common driver,” Regina Rodrigues, lead author of the report and professor of oceanography at the Federal University of Santa Catarina in Florianópolis, Brazil, told Global Citizen. “We used several scientific tools ... to find the most extreme droughts, and when we traced back [the information] we realized that there was this kind of wave pattern coming from the Indian Ocean.

“Once you know where these events come from, then you can monitor it, and that would give you better prediction ability,” she added. “That’s the ultimate goal.”

The drought started in 2013 when a powerful atmospheric convection, which happens when different temperatures collide in the atmosphere, erupted over the Indian Ocean. This caused a “planetary wave” to form in the ocean and travel to the South Atlantic.

Once there, the warm mass of water interfered with local precipitation conditions, triggering an “atmospheric blocking” that prevented clouds from forming and releasing rain above Eastern South America. A feedback loop then formed as the lack of clouds caused more sunlight to fall on the ocean, creating an intensifying marine heat wave that further interfered with the surrounding climate. The resulting drought in parts of Brazil caused devastating health and economic impacts throughout 2014.

The prevalence of dengue fever, a potentially lethal mosquito-borne disease, tripled in the country because more people, in their desperation to have enough water, kept buckets of water out in the open, allowing mosquitoes to thrive.

“You have all these small buckets of water everywhere, plus the high temperature, it’s perfect for the increase of mosquitoes,” Rodrigues said.

Coffee farms, which are sensitive to climate shifts, took a major hit and worldwide prices of coffee rose. Soy production similarly declined.

Mismanagement of water sources in cities like São Paulo, meanwhile, could no longer be ignored as the drought prevented replenishing rains from reaching critical reservoirs.

The researchers looked at climate data from the past few decades and found similar patterns to suggest that the Indian Ocean has sent planetary waves to the Atlantic before, but there's not enough data to definitively link the phenomenon to climate change, Rodrigues said.

At the same time, the general warming of the oceans has been linked to climate change, because the oceans absorb the majority of excess heat trapped in the atmosphere by greenhouse gas emissions. As the oceans become hotter, extreme weather events become more likely because warm and cool pockets of air become more likely to collide.

Rodrigues said that the next phase of research will be to examine how the heat wave affected marine life. Past research has shown that hotter ocean temperatures kill coral reefs and unravel marine ecosystems. Her team is working with 35 other institutions to explore this area of research as part of the European Union's *Project Horizon 2020*.

"It's important to try and understand the mechanisms of these events to predict the impacts on marine environments, which are already stressed by pollution, plastic and so many other things," Rodrigues said.



**THREE-TOED SLOTH FROM THE AMAZON RAINFOREST**

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“ I don't want your hope. I don't want you to be hopeful. I want you to panic, and act as if the house was on fire.

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Greta Thunberg