

AMAZON FOREST FIRE

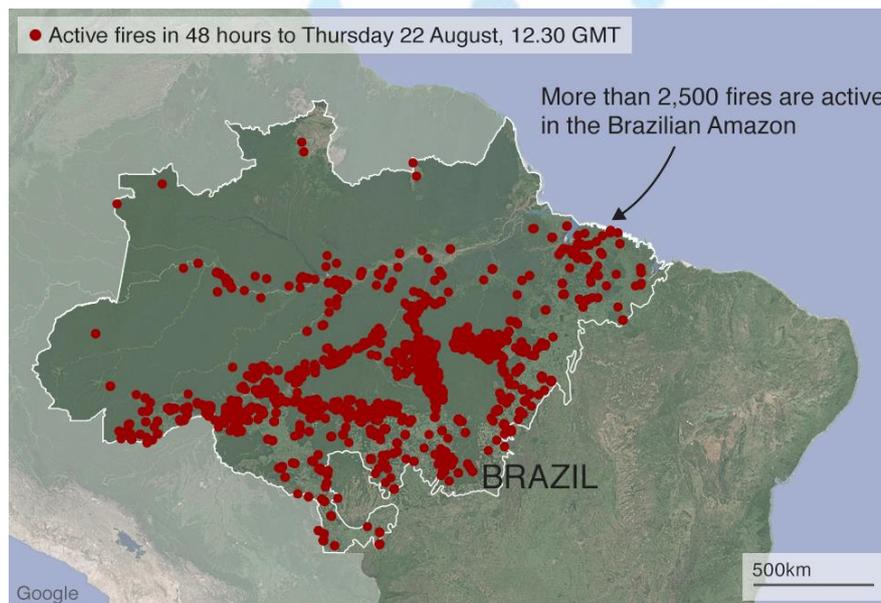
Prelims: Geography, Environment

Mains:

GS-I- Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc.

GS-III- Conservation, environmental pollution and degradation, environmental impact assessment.

- **Context:** The Amazon rainforest has been burning at a rate that has alarmed environmentalists and governments worldwide.

**Where Are the Amazon Fires Happening?**

- Started in the Amazonian rainforests, the fires have impacted populated areas in the north, such as the states of Rondônia and Acre, blocking sunlight and enveloping the region in smoke.
- The smoke has wafted thousands of miles to the Atlantic coast and São Paulo, according to the World Meteorological Organization.
- Brazil's National Institute for Space Research (INPE) has reported that forest fires in the region have doubled since 2013, and increased by 84% compared to the same period last year.

- ▶▶ This year alone there have been 72,843 fires, it said, and more than 9,500 of those have happened over the past few days.

How Did the Amazon Fires Start?

- ▶▶ The weekly Brasil de fato reported that Bolsonaro's anti-environment rhetoric has emboldened farmers, who organised a "fire day" along BR-163, a highway that runs through the heart of the rainforest.
- ▶▶ The weekly quoted a report by local newspaper Folha do Progresso, that **local farmers had set fire to sections of the rainforest a few days ago to get the government's attention.**
- ▶▶ "We need to show the President that we want to work and the only way is to knock it down. And to form and clear our pastures, it is with fire," Folha do Progresso quoted one farmer as saying.

Intensity of Fire:

- ▶▶ The Amazon fires are so large that they are visible from space. NASA released images on August 11 showing the spread of fires and reported that its satellites had detected heightened fire activity in July and August.

Why Are the Amazon fires A Cause for Concern?

- ▶▶ The Amazon rainforest is a repository of rich biodiversity and produces approximately 20 per cent of oxygen in the Earth's atmosphere.
- ▶▶ It is also home to indigenous communities whose lives and homelands are under threat due to encroachment by the Brazil government, foreign corporations and governments with economic interests in the resource-rich region, and local farmers.
- ▶▶ In a 2017 study, the University of Leeds found that carbon intake by the Amazon basin matches the emissions released by nations in the basin.

Rainforest to Savanna

- ▶▶ The burning of forests, therefore, implies additional carbon emissions. Research by scientists Carlos Nobre and Thomas E Lovejoy suggests that further **deforestation could lead to the Amazon's transformation from the world's largest rainforest to a savanna**, which would reverse the region's ecology.

Impact on Water cycle

- ▶▶ A National Geographic report said the Amazon rainforest influences the **water cycle not only on a regional scale, but also on a global scale.**
- ▶▶ The rain produced by the Amazon travels through the region and even reaches the Andes mountain range. Moisture from the Atlantic falls on the rainforest, and eventually evaporates back into the atmosphere.

- ▶▶ The report said the Amazon rainforest has the ability to produce at least half of the rain it receives. This cycle is a delicate balance.

What Environmental Protections Do Brazil's Laws Provide, And What Has Changed in Recent Times?

- ▶▶ Under Brazil's Forest Code of 1965, farmers could purchase Amazon land but could farm only 20% of it.
- ▶▶ Following the collapse of the military dictatorship in 1988, a new constitution gave indigenous populations legal ownership of their land and the right to reject development of their land.
- ▶▶ In 2012, the Forest Code was revised to reduce the area of deforested land required to be restored, and to reduce penalties for illegal deforesting. In 2018, Brazil's Supreme Court upheld these changes.

Political Promises:

- ▶▶ Bolsonaro, who took office in January 2019, had promised during his election campaign that his government would open up the Amazon region for business.
- ▶▶ The Amazon has large reserves of gold and other minerals. Along with aggressive policies of promoting agribusiness, Bolsonaro has opposed protections for indigenous tribal land.
- ▶▶ A few months before he won, The Washington Post reported that Bolsonaro had recommended exploiting the country's natural resources by tapping into the Amazon basin.
- ▶▶ After the victory, he was quoted as saying: **"Brazil should not sit on its natural reserves because a handful of Indians want to conserve it."**
- ▶▶ Since the 1960s, the Amazon has witnessed large-scale deforestation because of cattle-ranching, logging, power projects, mining and farming. Agribusiness products in 2016 represented 46% of Brazil's exports.
- ▶▶ Conservationists believe that for Brazil's government, short-term economic interests pushed by lobbies take precedence over environmental concerns.

How Has the Government Reacted to The Concerns Over the Fires?

- ▶▶ Bolsonaro has dismissed the INPE findings and said it was the time of the year when farmers burn the land for farming.
- ▶▶ In July, he fired INPE scientist Ricardo Galvao for publishing agency data that showed the accelerated rate of deforestation, calling the figures a lie and the images manipulated.
- ▶▶ Al Jazeera English quoted Bolsonaro as saying that "a report like this one that does not match the truth can cause a great damage to the image of Brazil". INPE has defended its data.

How Has the International Community Reacted?

- ▶▶ **Germany and Norway have suspended funding** for programmes that aim to stop deforestation in the Amazon and have accused Brazil of doing little to protect the forests.
- ▶▶ **Amazon Fund**
 - ❖ The Amazon Fund was created in 2008 to receive donations for non-reimbursable investments.
 - ❖ The objective was to prevent, monitor, and combat deforestation, as well as to promote the preservation and sustainable use in the Brazilian Amazon.
 - ❖ It consists of money **donated by Norway, the main donor, and Germany.**
 - ❖ The fund holds US\$850 million, and is managed by the National Bank for Economic and Social Development (BNDES) of Brazil.
- ▶▶ Indigenous groups and environment activists have led protests and criticised Bolsonaro for his comments and policies.

Importance of Amazon Forest:

- ▶▶ The Amazon basin, spread across millions of hectares in multiple countries, hosts massive sinks of sequestered carbon.
- ▶▶ Significantly, the Amazon forests are a key factor in regulating monsoon systems.
- ▶▶ The rainforests harbour rich biodiversity.
- ▶▶ Moreover, about 400 known indigenous groups present there have prevented commercial interests from overrunning the lands.
- ▶▶ Much of the Amazon has survived, despite relentless pressure to convert forests into farmlands, pastures and gold mines, and to build roads.
- ▶▶ The legacy of the ecosystem and the indigenous groups are now under great threat.

Threats for Amazon Forest:

- ▶▶ Illegal and purely planned mining activities for economic motives without taking proper measure for the protection of the ecosystem.
- ▶▶ Over extraction of natural resources such as timber, medicinal plants, fodder, fruits etc. results in the depletion of the available resources.
- ▶▶ Over logging - for paper industry which depend on trees, for the making of furniture, for building purposes.
- ▶▶ Energy projects such as hydro-electric power projects and industrial developments which affect the peaceful living of wildlife. Large amount of carbon dioxide and methane are released due to such industrial activities.
- ▶▶ Clearing of forest by small and local farmers for extending their agricultural area to produce more subsistence crops.

- ▶▶ Deforestation and successive conversion into grasslands for animal grazing.
- ▶▶ Constructional and developmental activities such as roads, oil & gas developments, pipelines etc. through forests.
- ▶▶ Poaching of animals that are considered vulnerable, which are prominent members of a food chain create imbalance in the food web.
- ▶▶ Increased human intervention in forest affects the normal life of nature and results in pollution and contamination of soil, water, air and other essential elements.

