

Topic – AMAZON FIRE

10th September 2019

SYLLABUS

1. **PRELIMS LEVEL: ENVIRONMENT AND ECOLOGY**

2. **MAINS: PAPER 3-CLIMATE CHANGE BIODIVERSITY.**

SOURCE: THE HINDU EDITORIALS, INDIAN EXPRESS.

KEY IDEAS

- 1 The effect of deforestation
- 2 **Substantive** challenges to global climate action.
- 3 **Unprecedented** pressure from developed countries on the global South.

Facts

- Intergovernmental Panel on Climate Change (IPCC) notes in its Fifth Assessment Report (AR5), the cumulative net addition of carbon to the earth system from terrestrial ecosystems since 1750 amounts to 30 Gigatonne (Gt) with an uncertainty of plus or minus 45 Gt. → “The net balance of all terrestrial ecosystems, those affected by land use change and the others, is thus close to neutral since 1750.”
- The key word here is net. Though cumulative emissions from land-use change since 1750 amounted to almost 180 Gt, driven largely by the more than six-fold expansion of cropland, they were compensated by the 160 Gt of absorption by existing vegetation not subject to land use change. Fossil fuel use, in contrast, contributed 375 Gt since 1750, that is more than 12 times that of the net cumulative emissions from terrestrial ecosystems.

Global Carbon Project reports

- Fossil fuel emissions currently pump about 9.9 Gt of carbon annually into the atmosphere, while land-use change accounts for 1.5 Gt. But terrestrial ecosystems absorbed 3.8 Gt. Taking sources and sinks together, they are a net sink.

AMAZON RIVER BASIN

- **In 1980**, stored 128 Gt of carbon, with 94 Gt in vegetation and 33 Gt in the reactive component of soil carbon.
- Fossil fuel emissions from coal, oil, and gas cannot however be put back in to where they came from. **Number** of fires this August, while large, is not exceptional. The year’s tally, till August 25, was 80,626, a 78% increase year-on-year. However, in Peru it is 105% higher, and in Bolivia 107%, both part of the Amazon basin.

Way ahead

- **Block** the EU-Mercosur trade deal to mark the European Union’s displeasure marks a new low in the global North’s pressure tactics on the South in dealing with the climate challenge.
- **Consequences of present situation:**
- Fires are set deliberately and spread easily in the dry season. The **desire for new land for cattle farming** has been the main driver of deforestation in the Brazilian Amazon since the 1970s.
- The **devastating loss of biodiversity** does not just affect Brazil.
- The loss of Amazonian vegetation directly reduces rain across South America and other regions of the world.

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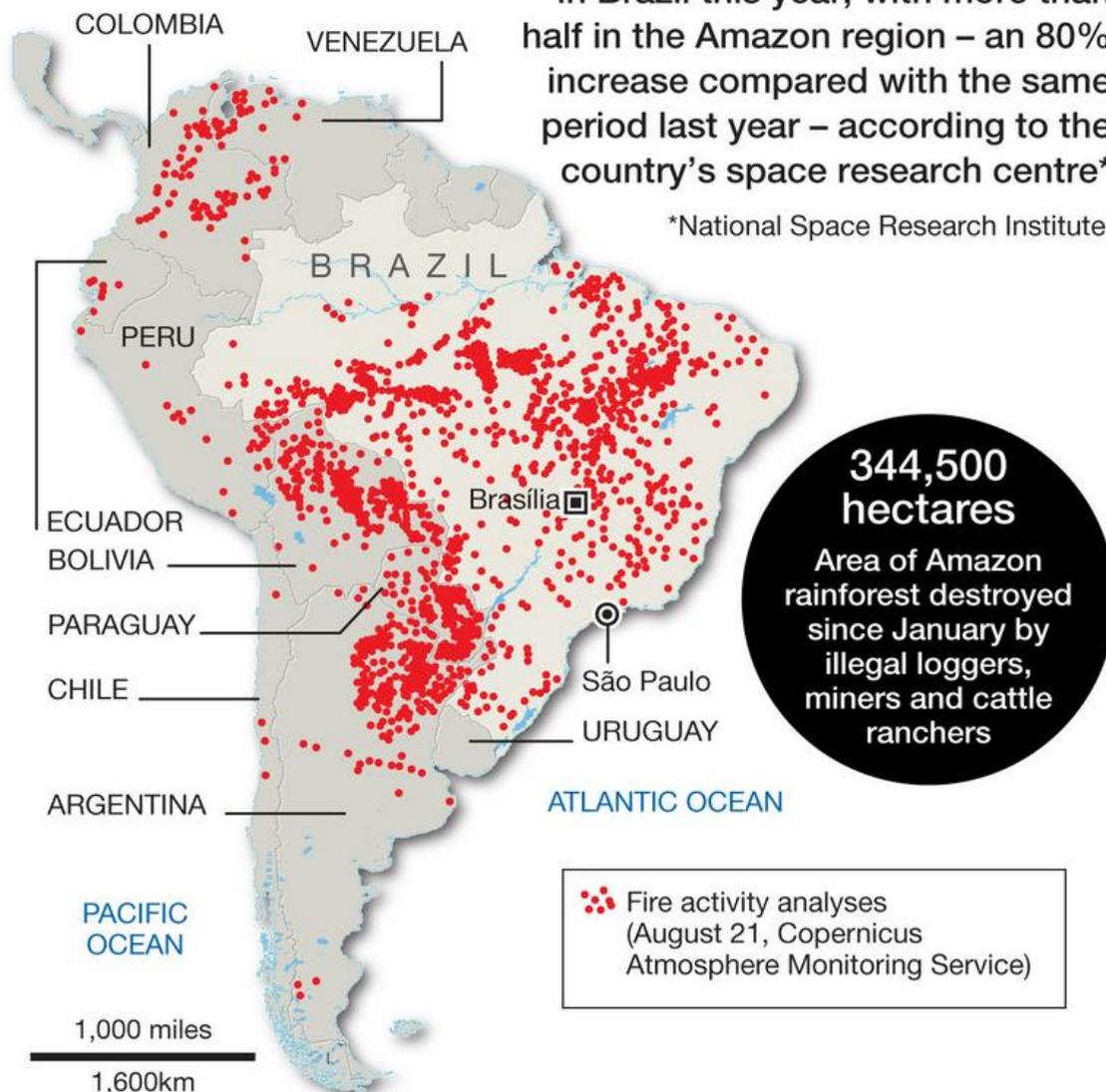
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- The planet is **losing an important carbon sink**, and the fires are directly injecting carbon into the atmosphere.
- If we can't stop deforestation in the Amazon, and the associated fires, it raises real questions about our ability to reach the Paris Agreement to slow climate change.
- The growing numbers of fires are the result of **illegal forest clearing to create land for farming**.

Amazon rainforest fires surge

There have been 72,843 fires in Brazil this year, with more than half in the Amazon region – an 80% increase compared with the same period last year – according to the country's space research centre*

*National Space Research Institute



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