

Amazon Fires Grow as El Niño Dries the Rainforest

Satellite images show smoke and spreading fires in a rainforest that is usually too wet to burn easily.



Smoke rises from fires in a green rainforest along a wide river.

Fires and thick smoke have spread across parts of the central and eastern Amazon **rainforest** as a strong El Niño helps dry out the region. El Niño is a natural warming pattern in the Pacific Ocean that can change rain and weather around the world for months. According to NASA Earth Observatory, satellites began detecting sharp increases in fire activity and smoke in the Amazon in September 2026.

The fires are burning in areas around Manaus and Santarém, two important cities in Brazil, and toward the mouth of the Amazon River. On October 12, a NASA **satellite** saw smoke streaming from fires on both sides of the river. That same day, officials in Manaus reported extremely poor air quality. Manaus is a city of more than 2 million people, and the smoke affected daily life there. Schools closed, city events were canceled, and children's sports leagues were called off.

One reason the smoke is dangerous is fine particulate matter, or PM2.5. These are tiny pieces of **pollution** small enough to get deep into the lungs. NASA reported that PM2.5 levels in Manaus rose above 135 micrograms per cubic meter,

which means 135 millionths of a gram of these **particles** were measured in a box of air one meter wide, one meter long, and one meter tall. That was the second-worst rating on a regional air quality index.

The Amazon is often called a rainforest for a reason. It is usually so wet that **lightning** starts less than 1 percent of fires there, NASA scientist Douglas Morton said. That means most fires now burning were started by people. Some began as management fires, which are fires set on purpose to clear shrubs from pastures or old crops from fields. But **drought** made the forest floor so dry that some of those fires escaped and began burning through the **understory**, the layer of plants and fallen leaves beneath the taller trees.

Scientists are especially worried because many rainforest plants and animals are not adapted to fire. In some ecosystems, fire is a normal part of life. In the Amazon, it can cause serious damage. Morton said some forests that burned during earlier El Niño years, including 2015 and 2023, are burning again. When trees are partly

charred, or burned on the outside, the forest can become weaker and easier to burn the next time.

NASA scientists also see a larger pattern. During El Niño years, fire risk can move across tropical regions like a line of falling dominoes. This year, drought and fire affected parts of Indonesia first. Now the Amazon is seeing the next stage. Scientists expect the fires near Manaus and Santarém to keep burning until the rainy season arrives in December 2026 or January 2027.

Satellites are important in this story because the rainforest is huge and hard to watch from the ground. Instruments on satellites can detect heat and smoke from space. But even satellites have

limits. Dense smoke, clouds, and the tree **canopy**, which is the rooflike top layer of the forest, can block sensors from seeing smaller fires below. One researcher working with NASA said satellite analysis has found many more possible fires near Santarém than standard fire counts show.

This matters far beyond Brazil. The Amazon is part of Earth's water cycle, the movement of water through air, land, plants, rivers, and oceans. It is also home to many species and many communities. The story shows how ocean temperatures, **rainfall**, human choices, air pollution, and space technology can all connect in one event.

Written from reporting by NASA.

THINK IT THROUGH

1. If most Amazon fires are started by people but made worse by drought, who should be responsible for reducing the damage: local land users, governments, or the wider world?

A strong answer: A strong answer should weigh human causes, climate patterns, enforcement, economic needs, and shared environmental effects.

2. Should officials close schools and cancel events when air quality becomes very poor, even if families depend on schools for meals, child care, or work schedules?

A strong answer: A strong answer should balance health risks from smoke with the real costs that closures can create for families.

3. What are the strengths and limits of using satellites to understand disasters like these fires?

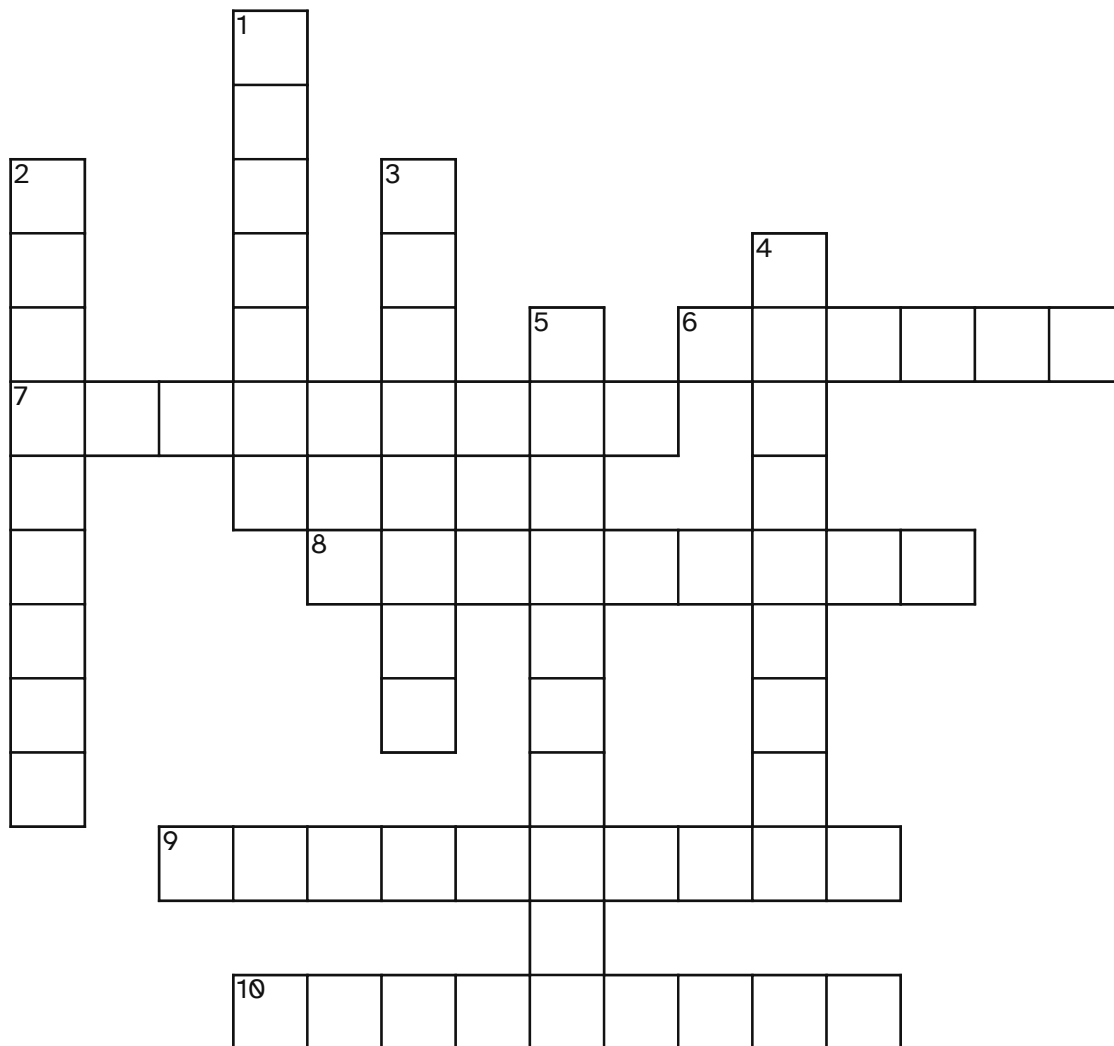
A strong answer: A strong answer should discuss wide-area monitoring, fast detection, blocked views from smoke or clouds, and the need for ground information.

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T S S B C I R T O A W A P H O N S T
T C A I A D R O U G H T A M R O E L
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CANOPY	DROUGHT	ECOSYSTEM	LIGHTNING	PARTICLES
POLLUTION	RAINFALL	RAINFOREST	SATELLITE	UNDERSTORY

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ACROSS

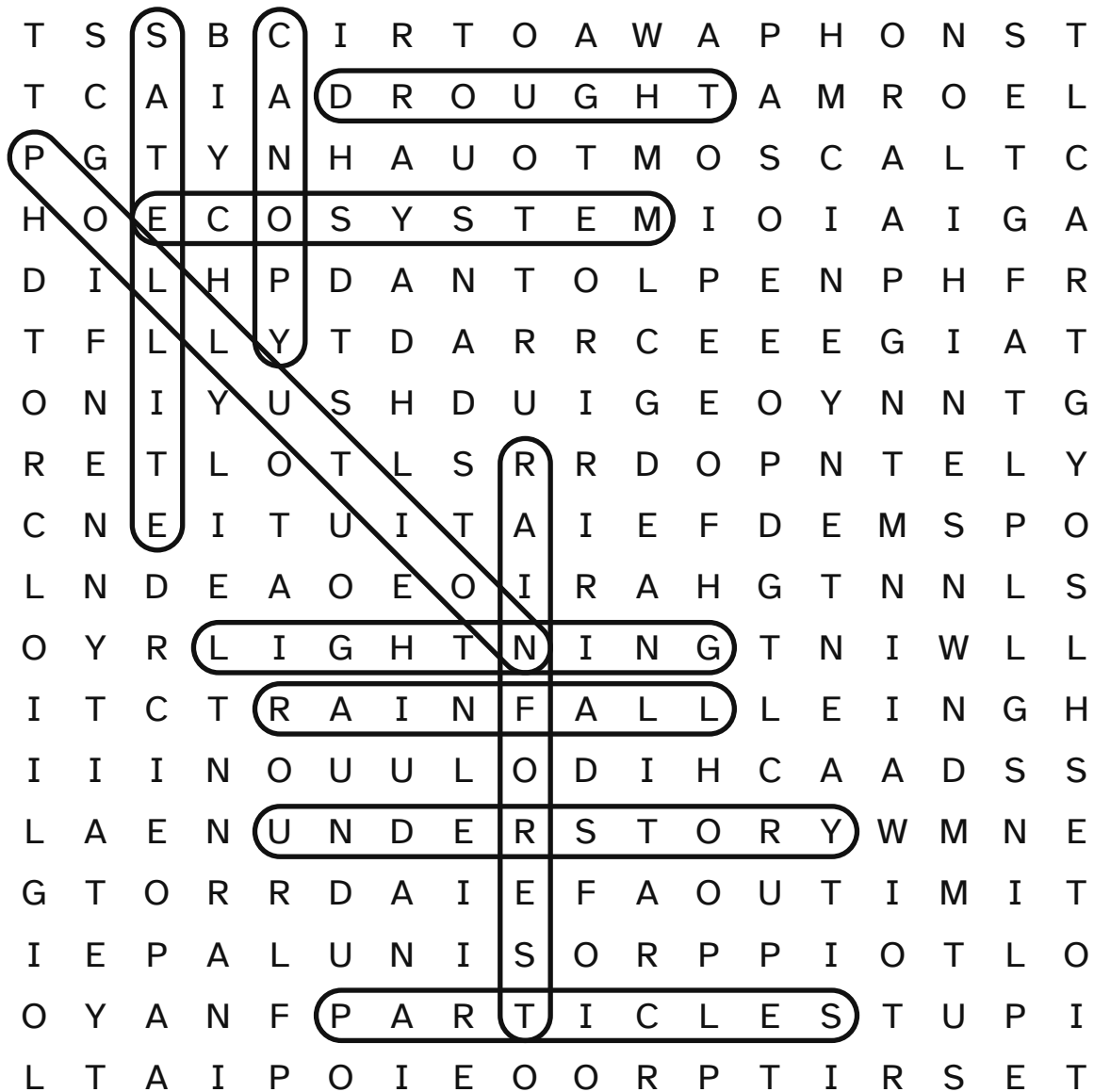
- 6 Rooflike layer of treetops in a forest
- 7 Powerful electric flash during a storm
- 8 Space object that circles Earth and gathers information
- 9 Thick woodland receiving lots of yearly precipitation
- 10 Living things and surroundings interacting as a community

DOWN

- 1 Long spell with far less precipitation than usual
- 2 Harmful material that dirties air, water, or land
- 3 Amount of precipitation a place receives over time
- 4 Tiny bits of solid or liquid matter floating in a substance
- 5 Lower forest layer of small plants below tall trees

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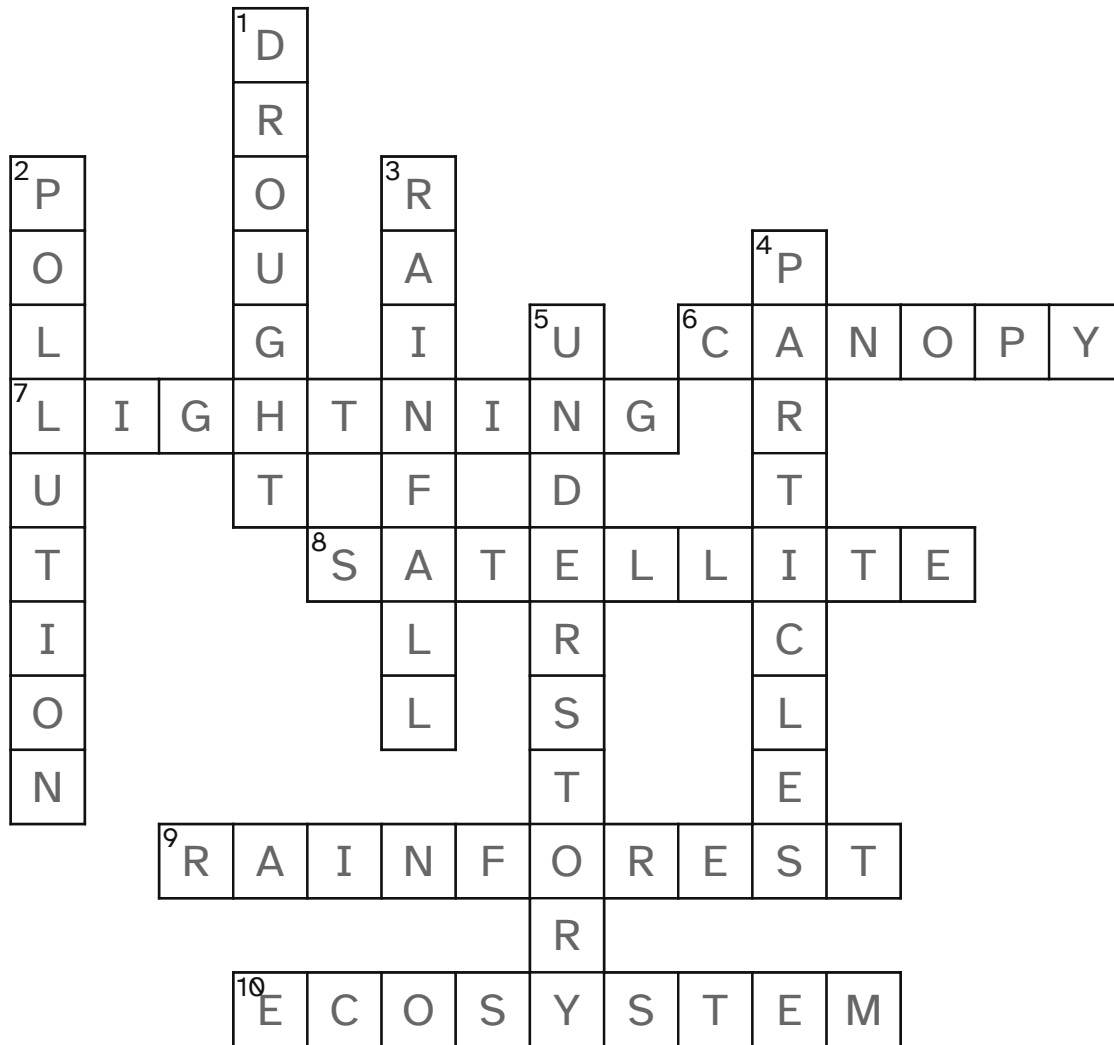
— answer key



CANOPY DROUGHT ECOSYSTEM LIGHTNING PARTICLES
POLLUTION RAINFALL RAINFOREST SATELLITE UNDERSTORY

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— answer key



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Where this came from

This article was written for 3andB from the reporting below. It is not a reprint — the wording is ours and the facts are theirs.

NASA

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<https://science.nasa.gov/earth/earth-observatory/fires-arrive-in-the-amazon-rainforest/>

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The article with a note on each question, a word search, a crossword, and the answer key to both.

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