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The Register-Guard

EUGENE, OREGON • THURSDAY, DECEMBER 4, 1997

Much of Amazon ripe for catastrophic wildfires

■ **Forests:** Burning half of the Amazon would release the same as 6 years' worth of worldwide fossil fuel emissions.

By TODD LEWAN
The Associated Press

At least half of the Amazon rain forest is a tinderbox ready to go up in smoke, raising the specter of an ecological disaster that may wipe out the world's largest wilderness.

About 12 percent of the 2 million-square-mile jungle is already gone, and burning has been so intense in recent months that a lake caught fire and people in jungle cities are being

treated for respiratory ailments.

And now, a new seven-year study suggests the burning may get much worse: The rain forest — even at its pristine core — is dangerously dry and flammable because of logging, deliberate burning around its edges and El Nino. The Associated Press obtained the research this week.

In one test in October, American and Brazilian scientists threw a match on kerosene that had been sprinkled in

a small parcel of undisturbed jungle in Paragominas in the eastern Amazon.

Normally the moist vegetation wouldn't catch.

But this time, 300 acres went up in flames.

"We're on the edge of a catastrophe," said Daniel Nepstad, a scientist for the Woods Hole Research Center, a Massachusetts-based institute that conducted the research at five test sites across the Brazilian rain forest.

"A lot of the Amazon has lost its capacity to protect itself from fire. When the forest is this dry, small fires can turn into giant ones and take off into primary forests."

Steve Schwartzman, director of the Environmental Defense Fund, said the research shows that the danger to the rain forest "has been taken to another level."

"Suddenly, it's gone from a slow, incremental process of cutting virgin rain forest to a potentially catastrophic situation," he said.

The alarm comes as representatives from more than 150 nations gather in Kyoto, Japan, in hopes of finding solutions to global warming, which some scientists say is worsened by the burning of rain forests.

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"A lot of the Amazon has lost its capacity to protect itself from fire."

DANIEL NEPSTAD
*Scientist who studied
Brazilian rain forest*

Register-Guardian (Eugene, Ore.)

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AMAZON

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Tropical forests absorb large amounts of carbon dioxide, one of the gases that traps solar heat and is thought to increase global warming.

Also, the burning adds to the atmosphere's carbon accumulation.

And this year, the Amazon and other rain forests have been scorched like never before.

Burning of Indonesian forests has released as much carbon in 1997 as all fossil fuel emissions in Europe.

"If you put Indonesian burning and Amazon burning together, you'd see that more of the world was on fire in 1997 than ever in recorded history," said Thomas Lovejoy, an ecological consultant at the Smithsonian Institution in Washington, D.C.

Philip Fearnside, an American scientist at Brazil's National Institute for Amazon Research in Manaus, Brazil, said that burning half of the Amazon would release 35 billion tons of carbon into the atmosphere — the equivalent of 6 years' worth of worldwide fossil fuel emissions. "That'll turn up global warming a notch," he said.

The Woods Hole research is the first hard evidence that suggests the Indonesia scenario may soon be repeated across the Amazon.

In October, researchers dug 35-foot shafts into the clay soil of unlogged Brazilian rain forest at five different sites. Several years earlier, they had struck water deposits at that depth.

This time, nothing.

Next, scientists tested the forests with kerosene and matches. "All of the fires just took off," said Nepstad.

That wouldn't have happened if trees had deep-soil water "pools" to tap, said Nepstad.

Normally, trees suck up the underground water through their roots and pump vapor out through their leaves.

That saturates the atmosphere and triggers rain.

But the pools have dried up across the Amazon in the last two years, partly because of a drought brought on by El Nino, the ocean-atmosphere phenomenon that has been disrupting weather patterns around the globe.

Farmers who burn scrub in cleared areas to fertilize the weak soil are drying out underground pockets of water in adjacent forest. And logging of precious hardwoods in scattered patches opens holes in the Amazon canopy and permits more sunlight to enter the forest, drying the air, soil and ground.

Drought makes trees shed their leaves, allowing more sunlight to parch the soil. "It becomes a vicious cycle," said Nepstad.

"Maybe God will smile on us and we'll get seven straight years of astounding rains in the Amazon and put the issue on different footing," said Schwartzman. "But with El Nino here, don't count on it."

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good at knowing where it was in the story and going back and finding it."

Nelson ducked his head and smiled at the praise, but said he worries about all the classes he's missing at his regular school.

"I have seven classes there, and here we don't have that many," he said. "But the people starting to come from (the university), that helps. It's nice. And there's going to be more of it, too."

While she applauds increased attention to the needs of the children at Skipworth, Martha Evans, volunteer program manager with the county's Department of Youth Services, said she also needs many volunteers to work with kids on probation.

"There are a lot of things people can do to help these kids, to help them realize that what they do with their lives matters to everyone in the community," Evans said. "Tutoring is always needed, and so are people who can come in and share special interests they have with the kids.

"I'd love to see community volunteers take some of the kids on probation with them while they do

their own volunteer work," she added. "It would help them develop a worthwhile relationship with each other and also show the kids the importance of giving back to their community."

No one should underestimate the importance of giving even a limited amount of time to any child, said Steve Carmichael, the youth services director.

"Many kids are very isolated from their families and their communities these days," Carmichael said. "And you never know just what it is that might inspire a child, what might change a life. It doesn't have to be a high-powered thing."

Even when the county's new multimillion-dollar youth campus has been finished, replacing the current Skipworth building with a state-of-the-art facility, the need for clothing, books, tutors and friends will still be there, he said.

"In fact, we'll need people from the community even more then, because we'll be able to accommodate a lot more troubled kids," Carmichael said. "When it comes to kids, it's that simple, human connection that makes all the