

The danger is mind-boggling

Dying Amazon endangers Earth

by Rudy & Sharon Haugeneder

Rainfall is vital to the planet's survival. Without rain, the rivers, lakes, and food-producing areas would become useless drylands.

And the rains aren't falling like they used to. Increasingly over the past decade, droughts have devastated the grain belts of Australia, North Africa, North America, and India, while a growing chorus of scientists are linking the apparently permanent changes in global rainfall patterns to the rapid destruction of the Amazon rain forest.

Top international scientists now warn that continued Amazon destruction must be halted immediately, or much of the world's food-producing land will turn into desert. Dr. Kenneth Burgman, a meteorological scientist at the National Academy of Sciences in Washington, D.C., says the Brazilian jungle is vital to the survival of the planet.

"The world's future climate depends on halting this insane destruction," he warns. "Satellite photographs show about one quarter of the rain forest has already been destroyed. The Amazon is the convergent zone of the trade winds of the world. Vast amounts of globally used moisture are drawn from the Amazon rain forest. Destruction of this cycle could well mean that 12 per cent, probably more, of the world's moisture would be lost forever."

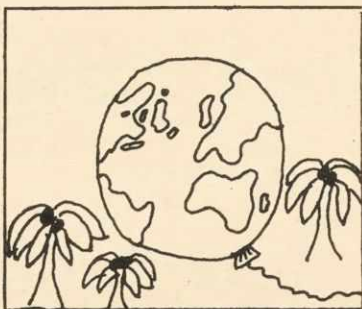
Brazilian jungle is vital to the survival of the planet

With declining global precipitation already a fact, Burgman says North America's central grain-growing plains can expect further "significant" declines in annual precipitation. However, he adds, not all regions will suffer drought; some regions could be deluged with precipitation.

Because of the delicate interrelationship between the planet's various ecosystems, the "long-range implications" could result in Asia's ecosystem shifting over the Soviet Union "and shifting the monsoons with it", says Burgman.

Shifting monsoons worry Dr.

Solochana Gadgil, a meteorological expert in India where the annual monsoons have failed to appear for the last three years. Planning to take a closer look at the impact of Amazon destruction on global climate, she says the overall temperature in India has risen so much that it's caused pressure systems to divert rains elsewhere. Burgman says he believes it's the result of the ecosystem in that part of the world trying to compensate for changes



caused by amazon destruction.

Meanwhile, Dr. Frederick A. Koonanoff of the U.S. Department of Energy in Maryland says his research shows the grain-growing plains of North America "will, by the year 2030, be a desert".

Brazilian meteorological scientist Dr. Carlos Nobre agrees, and is worried that not enough people — especially in his country — are listening to the warning. Newly completed research at the University of Maryland, where he was a visiting scientist as part of a Centre for Ocean, Land and Atmospheric Interactions biosphere-atmosphere simulation project, also shows "global rainfall could drop as much as 12 per cent if Amazon deforestation is allowed to continue"

Interviewed just before he returned to Brazil, Dr. Nobre explained that the rain and tropical forest work together to act like an engine that recycles Amazon moisture a number of times before the moisture is eventually pumped high enough into the atmosphere to be circulated globally by the trade winds. "Any disruptions will therefore affect global precipitation," says Nobre, including the prairie provinces and states, which he thinks could become a desert within 30 or 40 years.

Australian scientist Dr. Ann Henderson-Sellers says Amazon destruction is, in part, responsible for the devastating droughts that have hit her country. Rain forest destruction is also a major factor behind the increase in *El Ninos* that have ravaged the Pacific coast of North and South

America in recent years, according to Henderson-Sellers, interviewed at the Northern Centre for Atmospheric Research in Colorado. Before the flash-burning of the Amazon began in the 1970s, she says moisture was recycled four times in the Amazon basin before it was carried elsewhere.

Now "it is at three times, and (is) expected to stabilize at 1.7 if deforestation is complete," she says. Once the rain forest is gone, the accompanying climate change in Brazil will not allow reforestation, she says.

Princeton University weather researchers studying global weather changes are also worried. They say by the year 2050, the earth will be three to nine degrees Fahrenheit warmer than it is today.

Dr. Jagadish Shukla, who headed the biosphere-atmosphere project in Maryland, says the project's research is the most advanced in the world, and clearly shows the trouble the planet is in. "Our findings are that already changes and shifts are occurring in climates far exceeding the Brazilian region.



Our results are complete enough to say there will be significant changes, specifically in the central USA, but which will also range world-wide."

Other scientists speculate the Amazon rain forest accounts for

more of the world's moisture supply than current research shows — from one third to one half of the globe's precipitation. Unless the 5.5 million square kilometre rain forest that receives more than 100 inches of rain annually is there to recycle the rain, scientists say less than one tenth the moisture will make it back into the atmosphere to be circulated to the rest of the world by the trade winds.

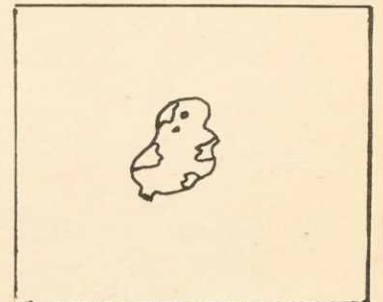
Despite growing international pressure to halt Amazon destruction, Brazil has increased the rate of deforestation over the past decade. Satellite and space shuttle photos show that, as early as 1980, about 11,000 square kilometres of forest were being cleared annually.

North American plains will be a desert by the year 2030

Dr. Tom Stone, with the U.S. Department of Meteorology in Boston, is concentrating his studies on the trade winds and the Amazon, as well as how jungle destruction will affect wind patterns and the moisture carried by them. The danger is mind-boggling, he says. The current rate of deforestation is putting the planet at risk: 27 million acres of trees are lost annually, enough fuel to heat nine states from Florida to Texas for five years.

Dr. Burgman says, "it will continue into the indefinite future

unless we take deliberate steps to slow or stop it. The health of our planet is now threatened enough



that many scientists, citizens, and political leaders are demanding immediate action to halt the burning of the Amazon."



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