Apocalypse Still

NEWS: Twenty-five years after the war ended, millions of Vietnamese continue to suffer the toxic consequences of America's most devastating chemical weapon, Agent Orange.

By Robert Dreyfuss
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Thirty-five years ago, Le Cao Dai, a Hanoi surgeon and veteran of Vietnam's post-World War II struggle against French colonialism, left his country's capital for a journey along the Ho Chi Minh trail far into what was then South Vietnam. There, under camouflage, Dai oversaw the creation of an underground field hospital for wounded and dying soldiers in the Central Highlands area around Pleiku and Kontum. From 1966 to 1974, amid some of the heaviest fighting of the war, Dai's makeshift unit was forced to relocate whenever American planes billowed clouds of Agent Orange and other toxic chemicals to defoliate forests that hid the communist insurgents. "I saw the planes spraying over the trees," he says. "We didn't know then what it was, but we knew it was some kind of chemical. When the leaves would turn yellow and disappear, we'd be forced to move to another place."

Like his fellow medics and their patients, along with villagers who lived in the area, Dai had little or no protection from the spray, and even less understanding of the horrific nature of the poison wafting over them. "We used pieces of plastic to shield ourselves, and I used it to cover myself and my hammock," he says. "We could smell the chemical everywhere. After the spraying some fish were killed, and -- what did we know? -- the soldiers simply caught the fish and ate them."

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By the early 1970s, Dai and other Vietnamese doctors began noticing soldiers suffering from unusual illnesses: liver and other cancers, immune-deficiency diseases, severe diarrhea, and persistent malaria that resisted drug treatment. They also noticed numerous miscarriages, premature births, and birth defects -- including gross malformations -- among soldiers' children. Alarm grew in Hanoi, and Dr. Ton That Tung, who pioneered Vietnam's study of Agent Orange and its consequences, desperately tried to get Dai to send samples of diseased liver tissues to him capital, more than 500 miles away, for testing. "He proposed that we organize a line of runners blood and tissue samples from the forest to Hanoi," Dai recalls with a rueful smile. "But he didn't understand our conditions. It was not possible." To get a sample to Hanoi, says Dai, would have taken months, rendering it useless.

In the years since the war's end, however, the reality of America's chemical warfare in Vietnam and rice paddies has slowly begun to unfold. Though thousands of American veterans of the war receive government compensation for illnesses linked to Agent Orange, the United States has responsibility for the devastating effects of its campaign on Vietnam. Millions, perhaps tens of thousands of Vietnamese, combatants and civilians alike, were showered with Agent Orange, and then lived and breathed amid the residue of an especially virulent form of dioxin, a byproduct of one of the defoliant's chemical components. This poison, a carcinogen once described as "the most toxic ever synthesized by man," infiltrated the country's water and soil, entering the food chain and accumulating in people's tissues, even passing from mother to child through breast milk. According to Vietnamese estimates, the millions of gallons of Agent Orange that soaked the southern half of Vietnam during the 1960s eventually killed or injured 400,000 people and reportedly contributed to the birth of 500,000 children. Chillingly, its effects are still being felt, not only among older Vietnamese veterans and other illnesses are often linked to Agent Orange, but among second- and third-generation children of the war, whose twisted bodies and crippled minds bear silent witness to the scourge. New research shows that in at least one hard-hit region of southern-central Vietnam, dioxin is still present in the environment, in fish, and in humans -- including young Vietnamese born before the war.

Still ravaged after nearly five decades of war and strapped by a fragile economy, Vietnam has begun to weigh the effects of Agent Orange on its land and people. A nationwide, province-by-province census of those affected is under way, and with limited international assistance Hanoi is struggling to conduct research on wartime chemicals and to care for victims. Without making demands, Vietnamese officials are encouraging the United States to assume some of the burden for the legacy of Agent Orange funding research and humanitarian aid. So far, though, Washington seems coldly indifferent to what it unleashed on Vietnam, intent on ignoring it or making it go away.

Today, Dai, 71, is executive director of the Agent Orange Victims Fund of the Vietnam Red Cross. The fund delivers medical care to Vietnamese veterans, farmers, and their affected children, provides vocational training to the disabled, and sometimes makes small loans to get people back on their feet. In such practical steps, one of Dai's most poignant missions is to explain to victims that their sufferings are not the result of some crime committed in the past. A former soldier may think that because he fought and killed too many people, this is revenge," in quang tri province, just below the old war Demilitarized Zone (DMZ) that marked the border between the two halves of divided Vietnam the monsoon rains have deluged the countryside -- a pounding waterfall that washes out road fields, filling lakes and rivers to near overflowing. Beyond a neatly tended garden, past a modest altar containing sticks of incense, is the home of Nguyen Huu Thanh, 64, a farmer who grows...
peppers in a nearby field. A former soldier in Vietnam’s revolutionary forces, Thanh served in from 1965 to 1976, stationed along Highway 9, a bitterly contested route running west through to the Laos border.

Dressed in blue-and-white pajamas, his bare feet resting on the concrete floor of his small home rises with great difficulty to greet visitors, trembling and barely able to stand. Plagued with se
cstant headaches and a debilitating disease of the nervous system, Thanh is also the father of his old son suffering from Down’s syndrome and cataracts. As baby chicks strut in and out of his

Thanh describes seeing Agent Orange descend over his unit during the war. "It smelled like a he says. "I saw the U.S. Army scatter-spray these toxic chemicals from planes. We saw these y clouds, and the trees died." Like many, Thanh drank contaminated water and ate vegetables t

called with the herbicide. Later, doctors told him that his illness, along with his son’s problem have been caused by his exposure to Agent Orange.

In Quang Tri and throughout much of South Vietnam, from the far south and the Mekong Delta through the Central Highlands to the DMZ, the United States sprayed nearly 20 million gallons of herbicides, including 11.2 million gallons of Agent Orange, on hardwood forests, dense mangrove and vast expanses of cropland to deny cover and food to enemy forces. From 1962 to 1970, U. C-123s pumped out the deadly clouds, with one plane spreading up to three gallons per acre in wide swaths, killing all vegetation beneath. American soldiers sprayed riverbanks from boats handheld sprayers and trucks to treat areas surrounding hundreds of U.S. bases. Throughout

Pentagon kept meticulous records of spray missions, which, when mapped now, create crisscross patterns of thousands of intersecting lines that blacken province after province.

Agent Orange -- so called because it was shipped to Vietnam in 55-gallon drums marked with stripe -- was the principal defoliant used in what the Pentagon called Operation Ranch Hand. potent witches' brew that contained equal measures of two powerful chemicals, whose effectiv

e been tested at the Pentagon’s War Research Service at Fort Detrick, Maryland, and field-teste

Florida Everglades and Puerto Rico, and later in Thailand and Vietnam. Though scientists, in

Nobel laureates, and organizations like the Federation of American Scientists and the Americ

Association for the Advancement of Science had been calling for a halt to Operation Ranch H;
during the Vietnam conflict -- branding it "barbarous" and a dangerous precedent for biologi

cal warfare -- the U.S. military repeatedly dismissed concerns about possible health and

environmental effects. Then, in 1969, scientists discovered that one of the components of Age

known by the shorthand notation 2,4,5-T, caused birth defects in laboratory animals. In Dece

President Richard Nixon announced a halt to the use of Agent Orange in Vietnam.

The following year, another study revealed that 2,4,5-T was contaminated with an unavoidable called 2,3,7,8-TCDD, an especially dangerous form of dioxin. Research began to accumulate s
dioxins are a clear and present danger to human health, and linking them to a wide range of d

including cancers and birth defects. What’s more, many of the 2.6 million U.S. veterans who s

Vietnam began to complain of illnesses that they traced to exposure to Agent Orange during t

What followed in the United States is well chronicled: years of litigation against companies su

Chemical and Monsanto, which manufactured Agent Orange; dozens of congressional hearin

g than $200 million in scientific research; and a class-action legal settlement that provided $1

more than 20,000 U.S. veterans. In the end, the Veterans Administration (now the Departme

Veterans Affairs) agreed to compensate Vietnam vets for a growing list of ailments, including
disease, respiratory cancers, soft tissue sarcoma, prostate cancer, and skin diseases like chlor

than 270,000 Vietnam veterans eventually registered with the VA’s Agent Orange program. B

nearly 6,000 had qualified for Agent Orange-related compensation, which provides up to $1,9

month for affected vets and more than $5,000 per month for those severely disabled and hom

That far exceeds the support available to former Vietnamese soldiers. Though respected by th
countrymen, they get only modest help from the government, which provides up to $7 per m
disabled vets. Thanh, the ailing Quang Tri veteran, sits erect and with great pride dons his wa
uniform, watching as his wife pins on his chest a series of medals earned during the fighting.
his attitude toward the United States now, Thanh says, "The war is over. Peace is here. But I v
the American people that our lives are very difficult, and we need help to work, to live."

Though Vietnam believes that hundreds of thousands of its citizens are victims of Agent Oran
remarkably little has been proved with scientific certainty about the consequences of America
warfare in the 1960s. Unable to devote sufficient resources to research, and lacking laboratory
required to study minute levels of dioxin contamination, Vietnam is well aware of its inability
the problem with precision.

The landscape itself indicates the extent of the danger. Large areas of Vietnam were stripped l
vegetation, and as much as half of the country's mangrove forests were wiped out. In the hills
Quang Tri and its provincial capital, Dong Ha, only scrub brush grows today where thriving, t
rainforests once stood. Thousands of American servicemen were harmed after remaining in tl
drenched hills for only a year, even though they ate processed foods and drank purified water
Vietnamese have been trapped for decades in an environment thoroughly polluted with the pl
the largest contamination of dioxin in the world," says Dr. Arnold Schecter, a University of Te
researcher who has made 16 visits to Vietnam since 1984. "In the last 10 years, evidence keep
each year that the dioxin from Agent Orange has caused a large number of health effects."

Still, finding the resources to prove cause and effect has proved impossible for Vietnam. No o
more about the limitations of research into Agent Orange than professor Hoang Dinh Cau. As
the National Committee for Investigation of the Consequences of Chemicals Used in the Viet:
Cau admits that in the immediate aftermath of the war, the country was preoccupied with sur
had a lot to do, so this issue did not get much attention," he says. "We did not have a budget fi
research, and there was very little international help." The 10-80 Committee, as Cau's group v
after its founding in October 1980, organized two major international conferences on Agent C
defends Vietnam against critics -- including the U.S. State Department -- who disparage how
has handled the issue. "We are trying to conduct research in the most adequate and honest w:
he says.

Vietnam's health care system is chaotic, and recordkeeping has been almost nonexistent, espe
during the 1970s and '80s. "We have not had a system to register people with particular disea
Dr. Pham Hoang Phiet, an immunology specialist at Ho Chi Minh City's medical school who l:
Agent Orange for two decades. "We know the effects of Agent Orange, but how to prove them
difficult."

Time is also working against researchers. The chemicals are disappearing little by little, wash
by monsoons and tides -- making it increasingly difficult to document the effects of spraying t
decades before. Given the lack of data and the vanishing traces of Agent Orange in blood and
samples, Phiet says, it may be too late to develop convincing scientific evidence to link disease
Operation Ranch Hand. "At this point, I think it may be impossible," he sighs.

Schechter, who knows more than perhaps any other Western scientist about the problem of Ag
in Vietnam, has conducted numerous studies, often under trying circumstances. He has battle
bureaucracy, fought to win foundation and other funding for his work, and struggled under fi
conditions -- from undependable transportation systems to failing electricity to a lack of dry i
storing frozen specimens -- that make research next to impossible. "The Vietnamese are to be
commended for doing some very clever studies," says Schechter. "But not at a level that could l
in scientific journals."
Five years ago, Schecter, Le Cao Dai of the Red Cross, and others published a landmark study in the American Journal of Public Health showing conclusively that high levels of dioxin contamination in the blood, tissue, and breast milk of Vietnamese living in sprayed areas. The study, wrote the researchers, "clearly document[s] elevated levels of 2,3,7,8-TCDD, the only dioxin contaminant in Orange, at much higher levels in persons living in areas sprayed in southern Vietnam." Levels found in fatty tissues, the study found, ranged from a mean of 14.7 parts per trillion (ppt) to a ppt among southern Vietnamese, compared to a minuscule 0.6 ppt among those in unsprayed north.

"There's no doubt that TCDD is a known carcinogen," says Schecter. He adds that the compound has been linked to immune deficiency, birth defects, nervous-system disorders, disruption of the reproductive system, liver damage, blood diseases, and skin problems.

But it was a study produced last year by a Canadian environmental firm, Hatfield Consultants, that focused international attention on the extent of the contamination deep into the area around the Ho Chi Minh trail south of Quang Tri province, in the A Luoi va Chua. Hatfield took extensive samples from soil, water, animals, and people, and tested for minute concentrations of TCDD. The researchers found "a consistent pattern of food-chain contamination...in the air base area, which included soils, fishpond sediment, cultured fish, and humans." They also found relatively high concentrations not only among older people, who had been exposed to Agent Orange during the war, but among the young. "People living in the region who were born after the war also possessed high dioxin levels...indicating a continuing dioxin uptake caused by contamination of the food chain," Hatfield reported.

"Concentrations of dioxin are high particularly around the perimeter of a former U.S. base we disturbed," says David Levy, a Hatfield ecologist who was part of the team that conducted the research. "If you disturb the soil, you create a mechanism where those contaminants could reenter the food chain.

Like the Vietnamese, Hatfield ran up against one of the major factors limiting serious research: contamination's enormous expense. Testing a single soil or tissue sample for tiny traces of Agent Orange dioxin can cost between $600 and $1,000, and to perform a single study might require even thousands of such samples. "Our constraint is purely financial, measuring ultratrace contamination in parts per trillion," says Levy. "For Vietnam, to do a nationwide assessment would cost millions of dollars."

If tracing the illnesses of Vietnamese soldiers and civilians to Agent Orange is difficult, linking the chemical to the thousands of children born with defects after their parents were subjected to the war's pollution proved even more daunting. Nevertheless, the most reliable evidence strongly suggests that the children of American veterans are suffering from secondhand exposure to the toxin. The United States has acknowledged a link among the children of American veterans; in 1996, the VA added the birth defect spina bifida to its list of health problems eligible for government compensation. In the United States, intensive research continues over a lengthy list of other birth defects that may have been caused by Agent Orange.

Even with the limitations on research in Vietnam, there are strong indications that exposure to the toxic chemical has led to a significant increase in serious birth defects. According to data provided by Le Cao Dai of the Red Cross, surveys of Vietnamese soldiers show that more than five percent of the children fathers of these veterans who were heavily exposed to Agent Orange were born with birth defects, compared to one percent for soldiers who remained in North Vietnam and avoided exposure. Many Western scientists question the methodology of such studies, but for the Vietnamese they are good enough. "My only doubt," says Dai.

Nowhere are the practical problems associated with the high cost of such tests more evident than...
suburb of Hanoi, where Nguyen Quang Que, 52, sits quietly with his family in a tiny home. Ot
and water buffalo roam free. On a small bamboo cot in the middle of the family's living quart
dughter, 20, a victim of cerebral palsy, writhes painfully, uttering incoherent cries, her limbs
bent and tangled at odd angles, unable to perform even the most basic bodily functions on he
a nine-year veteran of the war, was repeatedly exposed to Agent Orange while passing through
sprayed zones during the fighting. Afterward, beginning in 1974, three of Que's children died
the fourth developed her catastrophic disabilities.

"She now has a vegetative life," says Dai. When I ask whether Que and his wife, Thien, have ev
tested for dioxin residues, Dai gazes softly at me for a moment. "To test this family would cost
each," he says quietly. "If we had that money, wouldn't it be better to give it to the family?"

For the State Department, the question of how to respond to Vietnam's concerns over Agent C
explosive one -- especially for the U.S. embassy in Hanoi, which handles Agent Orange inquir
were poison. "It's a very, very sensitive issue," says Scott Weinhold, spokesman for U.S. amba
Peterson. The embassy refused to set up an interview with its science and technology officer, insisting that all inquiries be submitted in writing and all statements be approved by Washing
Mother Jones submitted eight detailed questions, the embassy issued a terse, two-sentence re
saying merely that the United States "believes the Agent Orange issue should be addressed on
basis."

Reached earlier by telephone, Eiland downplayed the issue rather than addressing it. "I don't
that it's a distraction, but Agent Orange is not at the top of our list," he said. He suggested tha
Jones drop the story in favor of reporting about U.S. soldiers still missing in action in Vietnam the ongoing U.S.-Vietnam trade talks.

In Washington, a State Department official speaking on background was far more frank. Aske
Vietnam has raised the issue of compensation for Agent Orange victims in private talks with t States, the official sighed audibly before adding, "Ohhhh, yes. They have. But for us there is re
that if we start down the road of research, what does that portend for liability-type issues fur
far, no U.S. agency, including the U.S. Agency for International Development, has launched a
to deal with Agent Orange in Vietnam. Even the Environmental Protection Agency is steering
issue. "We're not involved with Agent Orange," says Sarita Hoyt, who led an EPA mission to V
year. "It's a very controversial issue."

The United States also appears to be encouraging its allies not to support Vietnam on Agent C
Geoghegan, who heads the Hanoi office of the International Federation of the Red Cross, reco
fundraising swing that he made to European embassies in Vietnam recently, asking for help t
program for victims of Agent Orange. "I've knocked on the doors of so many embassies here,"
"but everyone says that they can't help because they don't want to offend the United States."

Chuck Searcy, who represents the Vietnam Veterans of America Foundation (VVAF) in Hano
followed the Agent Orange controversy for years. "I am absolutely convinced that the United tr
hunker down for a hundred years before they admit any guilt or liability over Agent Orange,"
Searcy has also heard reports of spills of Agent Orange at former U.S. bases where as many as
gallons simply disappeared into the ground.

According to Searcy, U.S. ambassador Pete Peterson is highly attuned to the sensitivity of the
Orange issue. Not long ago, Searcy says, a U.S. official from Washington toured Quang Tri an
some of the people believed to be victims of Agent Orange. But when Searcy mentioned the of
Peterson expressed a concern for the messenger that indicated the danger of the message. See
the ambassador responding, "That guy better watch what he says, or he will be out of a job."
Vietnam certainly has its own reasons to avoid pushing the issue too aggressively. Given the d war and mutual suspicion between Washington and Hanoi, it's not surprising that many Viet don't trust the United States, and those feelings are complicated by Vietnam's worries that toxic food exports could suffer if the world perceives that Vietnam is widely contaminated with TC reason, Vietnamese officials are at pains to emphasize that the dioxin contamination has largely dissipated in most areas of the country. Hanoi also deals gingerly with the Agent Orange issue places a high priority on commercial ties with the United States and on advancing trade talks.

In fact, the chemicals are gradually disappearing, making it harder to pinpoint the extent of the catastrophe. U.S. veterans groups urgently want the United States to fund research in Vietnam too late, in the hope that findings there might shed light on diseases suffered by Americans who fought the war. To that end, several members of Congress, led by Rep. Lane Evans (D-Ill.), are pressuring the federal government to allocate $1.5 million for research in Vietnam.

Yet even if tens of millions of dollars were devoted to studying the issue, research represents an edged sword for Vietnam. For an American government intent on avoiding responsibility for what it caused, additional studies -- which could take years to complete -- would enable Washington to do nothing while awaiting the results. For Vietnam, the dire need is not for research, but for funds for those affected.

Outside Hanoi, at the Vietnam Veterans Association Friendship Village, one of approximately 15 facilities the country has set up to care for veterans and children injured by Agent Orange, aid workers have no doubts about America's responsibility. "We've gotten suggestions that maybe we should sue about Agent Orange, but our perception is different," says Nguyen Khai Hung, director of the village. "We do not blame the companies, because they produced Agent Orange under the order of the U.S. government. It was the government that gave the order to spray the chemical, and it is the government that has to be responsible."

In a small room at Friendship Village, perhaps three dozen children are gathered. Their disabilities range from mild retardation to severe physical deformity, but they smile and clap as they sing a song, dispensing for a lunch of rice, vegetables, and meat. With a staff of 21 people, including doctors, teachers, physical therapists, and support staff, the village cares for some 70 children and 30 adults. This year, Hung says, the village will spend 500 million Vietnamese dong -- about $36,000 -- for everything: salaries, food, upkeep.

If there is any silver lining to the Agent Orange disaster, it starts with the clouds that bring monsoon rain to Vietnam. "The tides in Vietnam are very powerful," says Dai of the Red Cross, "sometimes filling rivers 60 kilometers inland and then pulling waste matter out to sea." All of this, over time, has helped the country purge itself of Agent Orange dioxin.

Yet all the water in the world can't cleanse the bodies of Vietnamese already sickened by the toxic chemical.
them, Vietnam’s burden begins with medical care and rehabilitation. Next comes educating people about steps they can take to protect themselves. In some areas, this may mean fencing off hot spots or cleaning them up. Cleanup, however, may be next to impossible if it is large areas of southern Vietnam are still dangerous to humans. "You can't dig up and steam clean hundred billion tons of dirt," says Searcy of the VVAF.

"The United States must help," insists Dai. "The children being born now with birth defects did not hail from the United States. But they are suffering."
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Apocalypse & Chill is the sixth studio album by the Dutch symphonic metal band Delain. It was released on 7 February 2020 via Napalm Records. It is the final studio album to feature vocalist Charlotte Wessels, guitarist Timo Somers and bassist Otto Schimmelpenninck van der Oije, as well as the only studio album to feature drummer Joey de Boer on all tracks before his departure with the other members. Once called the heart of darkness, Bob Geldof reveals there may not just be one heart and one darkness in Africa. If the Congo really is the heart of darkness, that heart does not come from its people or the land; it came from outsiders. Riding along the Congo, Geldof, explores its tales of oppression and warfare, a violent history fueled my man's ever increasing greed for the natural resources ... Apocalypse Still. From DocuWiki. Jump to: navigation, search.Â He also talks to real life Harry and Harriette Potters in a Congaleese Hogwarts where he meets children who still believe that the supernatural is more powerful than medicine and science. Also eventually Walmart is gonna transition towards the Ecommerce stuff leading to the retail apocalypse but there is still some time left for that to happen and so people for now till the apocalypse hits us can start selling their products in Walmart. Hope this answers your question. 1. Let our journalists help you make sense of the noise: Subscribe to the Mother Jones Daily newsletter and get a recap of news that matters. Thirty-five years ago, Le Cao Dai, a Hanoi surgeon and veteran of Vietnam’s post-World War II struggle against French colonialism, left his country’s capital for a journey along the Ho Chi Minh trail far into what was then South Vietnam.