

## **Agent Orange: Death by defoliant**

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“Not only crop destruction, but U.S. policies of extensive bombing, defoliation, and relocation of people from the countryside seem clearly to fall within the definition of crimes against humanity and war crimes,” wrote the Stanford Biology Group in a report entitled “The Destruction of Indochina”.<sup>1</sup>

As part of a deliberate campaign of environmental destruction during its war against Vietnam, the U.S. sprayed the countryside with herbicides containing carcinogenic chemicals to destroy tropical forest foliage and agricultural crops.<sup>2</sup> The objectives of this diabolical program, which perhaps should be called “death by defoliant”, were threefold: first, to deprive the Vietnamese resistance fighters of the National Liberation Front (NLF) of hiding places and cover; second, to starve them into surrender by wiping out their food supply; and third, to drive rural peasants to urban areas controlled by the U.S.-backed regime in an attempt to decimate popular support for the NLF.<sup>3</sup>

Code-named Operation Hades and later Ranch Hand, the aerial application of the defoliant known as Agent Orange, which was manufactured by Dow Chemical and Monsanto,<sup>4</sup> extended from August 1961<sup>5</sup> until August 1970, before being suspended by Deputy U.S. Secretary of Defense David Packard.<sup>6</sup> Some 49 million liters of the lethal herbicide<sup>7</sup> were sprayed over 12 percent of the land area of Vietnam using average application rates 13 times higher than those recommended by the U.S. Department of Agriculture for domestic weed control.<sup>8</sup>

Agent Orange, so called because of the herbicide’s orange striped container,<sup>9</sup> is a mixture of 2,4-dichlorophenoxyacetic acid (2,4-D), and n-butyl-2,3,4-trichlorophenoxyacetate (2,4,5-T),<sup>10</sup> both of which are likely carcinogens according to the International Agency for Research on Cancer (IARC), which is affiliated with the World Health Organization (WHO).<sup>11</sup> Over 18 million kilograms of 2,4,5-T, which constitutes 50 percent of Agent Orange, were sprayed on Vietnam as part of the fiendish U.S. war crimes there.<sup>12</sup>

By 1966, 2,4,5-T had been shown to cause greatly increased rates of birth defects, a fact which was suppressed by the U.S. Government but confirmed by news reports from Saigon of increased birth deformities.<sup>13</sup> The 2,4,5-T was also found to have been contaminated with TCDD (2,3,7,8- Tetrachlorodibenzo-p-dioxin), a known carcinogen<sup>14</sup> described as “perhaps the most toxic molecule ever synthesized by man”.<sup>15</sup> That the executives at Dow Chemical were well aware of the toxicity of the dioxin-contaminated 2,4,5-T was confirmed by an intra-company memo dated 22 February 1965.<sup>16</sup>

As a result of the immoral and irresponsible herbicide spraying by the U.S. under Operation Ranch Hand, it is estimated: 4.8 million Vietnamese were directly exposed to Agent Orange; 800,000 people suffer serious health problems and require constant medical attention; and 50,000 deformed children were born to parents who were either

directly sprayed with defoliant or were exposed through consumption of contaminated food and water.<sup>17</sup>

In 1990, in order to keep the Agent Orange atrocities under wraps, the White House under President Ronald Reagan ordered the cancellation<sup>18</sup> of a 1987 Center for Disease Control study,<sup>19</sup> which had concluded that Vietnam veterans ran a 50 percent increased risk of developing non-Hodgkin's lymphoma (NHL), a type of blood cancer,<sup>20</sup> as compared to veterans who had been stationed elsewhere.<sup>21</sup> Today, the U.S. Veterans' Administration assumes that all military personnel who served in Vietnam from 1962 to 1975 were exposed to Agent Orange.<sup>22</sup>

Since then, research has linked Agent Orange exposure to the following cancers: Soft tissue sarcoma; NHL; Hodgkin's disease; and Chronic lymphocytic leukemia (CLL), including hairy cell leukemia and other chronic B-cell leukemias. Evidence also suggests a link between Agent Orange exposure and Respiratory cancers, Prostate cancer and Multiple myeloma.<sup>23</sup> Also, sufficient evidence exists suggesting Agent Orange exposure is linked to Chloracne, Amyloidosis, Transient peripheral neuropathy, Parkinson's disease, Porphyria cutanea tarda, High blood pressure, Ischemic heart disease, Type 2 diabetes, and Spina bifida in children of those exposed.<sup>24,25</sup>

In addition, exposure to the dioxin-laden chemical has been shown to be a risk factor in a number of cancers, diseases and other conditions, including: immune deficiency; reproductive and developmental abnormalities; central and peripheral nervous system pathology; endocrine disruption; diabetes; decreased pulmonary functions and bronchitis; eyelid pathology; altered serum testosterone levels; skin rashes; and thyroid disorders.<sup>26</sup>

And the remnants of Agent Orange from the U.S. war against Vietnam continue the legacy of death by defoliant:

- ❖ The environment around many former U.S. military bases is still contaminated,
- ❖ Heavily sprayed areas remain a source of dioxin contamination,
- ❖ Dioxin levels around Da Nang are 300 to 400 times higher than internationally accepted limits,
- ❖ Over a million hectares of forests have been destroyed, causing a loss of ecological equilibrium,
- ❖ Birds and animals have been destroyed along with forests either by direct spraying or as a result of destruction of food sources,
- ❖ Barren, dry lands still exist in provinces in southern Vietnam where nothing grows,<sup>27</sup> and
- ❖ Higher rates of birth defects exist among residents of sprayed regions and among families of veterans who fought in the south.<sup>28</sup>

Agent Orange defoliation operations by the U.S. were not limited to Vietnam, either, but were also conducted in Korea in the demilitarized zone (DMZ).<sup>29</sup> From 1968 to 1969, over 220,000 liters of Agent Orange were sprayed over some 8500 hectares of Korean land near the DMZ, affecting an estimated 4,000 U.S. and 30,000 Korean soldiers.<sup>30</sup> Others claim that the deadly defoliant was used there as far back as the late 1950s.<sup>31</sup>

According to a U.S. Veterans' Administration press release, "VA will presume herbicide exposure for any Veteran who served between April 1, 1968, and Aug. 31, 1971, in a unit determined by VA and the Department of Defense (DoD) to have operated in an area in or near the Korean DMZ in which herbicides were applied."<sup>32</sup>

The use of Agent Orange in Korea is particularly relevant to the writer, since I served in the U.S. Army from August 1969 to August 1970 as a driver with the 2<sup>nd</sup> Supply and Transport Battalion at Camp Jessup, Munson, Korea located a few kilometers south of the DMZ<sup>33</sup>. I was shocked to learn that I, too, must have been exposed to Agent Orange while carrying out my driving duties all around the region. Perhaps exposure to Agent Orange caused my thyroid problems or my children's developmental disorders; lacking clear evidence, I don't know for certain. But I would find comfort in knowing the truth—as no doubt would every victim of this horrific herbicide—even 40+ years after the fact.

Veteran Chuck Searcy, who returned to Vietnam to help with humanitarian programs for disabled children, said, "For me, the evidence is clear. I know it's difficult to say 100 percent that this is the result of Agent Orange, but if you can find no other reason, then I agree with these families who believe the problem is the result of Agent Orange."<sup>34</sup>

In a February 2008 decision, the U.S. second circuit Court of Appeals dimmed Agent Orange victims' hopes of bringing to justice the criminal U.S. government and complicit chemical companies responsible for Agent Orange.<sup>35</sup> The Vietnamese plaintiffs then appealed to the U.S. Supreme Court, which on 2 March 2009 refused to hear the case, bringing an end to litigation,<sup>36</sup> but not the decree on the victims of death by defoliant.

Thus, almost 40 years have passed since the end of the U.S. war against Vietnam, but for over 4 million Vietnamese<sup>37</sup> and other victims of exposure who suffer profoundly both mentally and physically each day, this crime against humanity remains unpunished.

## Endnotes

<sup>1</sup> Stanford Biology Group, *The Destruction of Indochina*. Bulletin of the Atomic Scientists, May 1971, p. 38. URL: <http://books.google.com/books?id=agsAAAAAMBAJ&pg=PA36#v=onepage&q&f=false> (Accessed 24 December 2012)

<sup>2</sup> Stanford Biology Group, *ibid.*, p. 36.

<sup>3</sup> Stanford Biology Group, *ibid.*, p. 36, 39.

<sup>4</sup> Agent Orange. Wikipedia. URL: [http://en.wikipedia.org/wiki/Agent\\_Orange#cite\\_note-sbsg-1971-p36-9](http://en.wikipedia.org/wiki/Agent_Orange#cite_note-sbsg-1971-p36-9) (Accessed 24 December 2012).

<sup>5</sup> Susan Schnall, *Agent Orange: Lasting Legacy of the American War in Vietnam*. Vietnam Agent Orange Relief & Responsibility Campaign, 27 August 2008, p. 4. URL: [http://www.vn-agentorange.org/edmaterials/scientific\\_report\\_2008.pdf](http://www.vn-agentorange.org/edmaterials/scientific_report_2008.pdf) (Accessed 24 December 2012).

<sup>6</sup> Stanford Biology Group, *ibid.*, p. 36.

<sup>7</sup> Susan Schnall, *ibid.*, p. 4.

<sup>8</sup> Stanford Biology Group, *ibid.*, p. 36.

<sup>9</sup> Ian Timberlake, *Vietnam Agent Orange victims vow to fight on*. Dawn, 8 April 2009. URL: <http://archives.dawn.com/archives/540> (Accessed 25 December 2012).

<sup>10</sup> *Agent Orange and Cancer*. The American Cancer Society 25 June 2010. URL: <http://www.cancer.org/cancer/cancercauses/othercarcinogens/intheworkplace/agent-orange-and-cancer?sitearea=PED> (Accessed 24 December 2012).

<sup>11</sup> *Agent Orange and Cancer*, *ibid.*

- <sup>12</sup> Stanford Biology Group, *ibid.*, p. 36.
- <sup>13</sup> Stanford Biology Group, *ibid.*, p. 38.
- <sup>14</sup> Committee Recommendations: 2,3,7,8- Tetrachlorodibenzo-p-dioxin (TCDD). National Toxicology Program, U.S. Department of Health and Human Services, 5 January 2009. URL: <http://ntp.niehs.nih.gov/index.cfm?objectid=D3D7DB18-F1F6-975E-716813304ED78D8B> (Accessed 24 December 2012).
- <sup>15</sup> Peter H. Shuck, Agent Orange on Trial: Mass Toxic Disasters in the Courts. No publisher: 1986, 1987. p. 18. URL: <http://books.google.com/books?id=waTdqLYCyPMC&pg=PA18#v=onepage&q&f=false> (Accessed 24 December 2012).
- <sup>16</sup> Susan Schnall, *ibid.*, p. 9.
- <sup>17</sup> Susan Schnall, *ibid.*, p.24.
- <sup>18</sup> Agent Orange Review. U.S. Veterans' Administration, Vol. 6 No. 1, October 1988. p. 3 URL: [http://www.publichealth.va.gov/docs/agentorange/reviews/ao\\_newsletter\\_oct88.pdf](http://www.publichealth.va.gov/docs/agentorange/reviews/ao_newsletter_oct88.pdf) (Accessed 24 December 2012).
- <sup>19</sup> Susan Schnall, *ibid.*, p. 17.
- <sup>20</sup> Non-Hodgkin's Lymphoma. National Cancer Institute. URL: <http://www.cancer.gov/cancertopics/types/non-hodgkin> (Accessed 24 December 2012).
- <sup>21</sup> Agent Orange Exposure Study. Center for Disease Control and Prevention, 1987, p. 94. URL: [http://www.cdc.gov/nceh/veterans/pdfs/TheAssociationofSelectedCancerswithServiceintheUSMilitaryinVietnam/AssociationofSelectedCancerswithServiceintheUSMilitaryinVietnam3\\_5.pdf](http://www.cdc.gov/nceh/veterans/pdfs/TheAssociationofSelectedCancerswithServiceintheUSMilitaryinVietnam/AssociationofSelectedCancerswithServiceintheUSMilitaryinVietnam3_5.pdf) (Accessed 24 December 2012).
- <sup>22</sup> Susan Schnall, *ibid.*, p. 20.
- <sup>23</sup> Agent Orange and Cancer, *ibid.*
- <sup>24</sup> Agent Orange and Cancer, *ibid.*
- <sup>25</sup> For a description of these diseases, see Veterans' Diseases Associated with Agent Orange, U.S. Department of Veterans' Affairs. URL: <http://www.publichealth.va.gov/exposures/agentorange/diseases.asp> (Accessed 24 December 2012).
- <sup>26</sup> Susan Schnall, *ibid.*, p.10.
- <sup>27</sup> Susan Schnall, *ibid.*, p.26.
- <sup>28</sup> Susan Schnall, *ibid.*, p.32.
- <sup>29</sup> U.S. Soldiers 'Sprayed Agent Orange Across Korea'. The Chosun Ilbo, 26 July 2011. URL: [http://english.chosun.com/site/data/html\\_dir/2011/07/26/2011072600741.html](http://english.chosun.com/site/data/html_dir/2011/07/26/2011072600741.html) (Accessed 24 December 2012).
- <sup>30</sup> John L. Davis, Agent Orange Defoliated Korea's DMZ. VFW Magazine, Vol. 87, No. 6, February, 2000. URL: <http://www.statesvillelaw.com/20.shtml> Accessed 24 Dec 2012).
- <sup>31</sup> Song Sang-ho, 'Defoliants sprayed on DMZ in late '50s'. The Korea Herald, 14 June 2011. URL: <http://nwww.koreaherald.com/view.php?ud=20110614000753> (Accessed 25 December 2012).
- <sup>32</sup> VA Publishes Final Regulation to Aid Veterans Exposed to Agent Orange in Korea. Press Release, U.S. Department of Veterans' Affairs, 25 January 2011. URL: <http://www1.va.gov/opa/pressrel/pressrelease.cfm?id=2035> (Accessed 24 December 2012).
- <sup>33</sup> Camp Jessup, 2nd S&T Battalion. Map. URL: <http://wikimapia.org/14822742/Camp-Jessup-2nd-S-T-Battalion> (Accessed 25 December 2012).
- <sup>34</sup> We see consequences many years after war, says US veteran. Ministry of Foreign Affairs, Vietnam, 25 March 2008. URL: [http://www.mofa.gov.vn/en/cn\\_vakv/america/nr040819114015/ns050222103749/view](http://www.mofa.gov.vn/en/cn_vakv/america/nr040819114015/ns050222103749/view) (Accessed 25 December 2012).
- <sup>35</sup> Ministry Of Foreign Affairs' Spokesman Mr. Le Dzung Answers Question on February 23, 2008. Ministry of Foreign Affairs, Vietnam, 23 February 2008. URL: [http://www.mofa.gov.vn/en/tt\\_baochi/pbnfn/ns080225142016/view](http://www.mofa.gov.vn/en/tt_baochi/pbnfn/ns080225142016/view) (Accessed 25 December 2012).
- <sup>36</sup> Agent Orange Lawsuit filed by Vietnamese Victims. War Legacy Projects. URL: <http://www.warlegacies.org/Lawsuit.htm> (Accessed 26 December 2012).
- <sup>37</sup> Vietnam Association for Victims of Agent Orange, Et Al, v. Dow Chemical Company Et Al. Petition for Writ of Certiorari. URL: <http://www.warlegacies.org/Agent%20Orange/Petition.pdf> (Accessed 26 December 2012).