

Agent Orange

A speech given to the public meeting “Agent Orange: an ongoing human tragedy and an act of environmental vandalism”, organised by Women’s International League for Peace and Freedom.

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I’m very pleased to have this opportunity to discuss the topic of Agent Orange and its implications, because I have long regarded its widespread use in Vietnam as one of the greatest acts of environmental vandalism committed in recent wars, and there have been many such acts of military vandalism. It highlights not only a contempt for the natural environment but also a contempt for the innocent lives that would be deeply affected by its use, and it is yet another example of the effects of war continuing decades after hostilities have ceased. I therefore want to congratulate both WILPF and the Agent Orange Justice group, and also Meredith Hunter of the ACT Greens, for their efforts in bringing this issue to our attention again. I want to emphasise that I am not an expert on this issue, but will share some of the information I have.

Agent Orange, as you are aware, was the most abundant herbicide sprayed during the Vietnam War, and it was so named because of the orange stripes on the barrels in which it was stored. I’m not going to repeat the data about how much was used etc, as others will do that this evening, but I think it’s worth emphasising the extent of use – over approximately 10%, some say 15 %, of what was then South Vietnam. That’s a vast area that was sprayed, between 1962 and 1971, with the heaviest spraying between 1967 and 1971. It is estimated that anywhere between

2.1 and 4.8 million Vietnamese were directly exposed to Agent Orange and other herbicides. We should remember, in relation to exposures, that the average length of stay in Vietnam for a US soldier was 6 months; for the Vietnamese, their length of stay in contaminated areas is life. Vietnamese authorities estimate that over 3 million citizens suffer serious health effects as a result of Agent Orange exposure.

While Agent Orange was the main herbicide used in the Vietnam War, it was not the only one. An agent called Agent Blue was also used, from 1962, primarily against food crops, with the goal – successfully achieved - of forcing the rural Vietnamese into the US-dominated cities, where many of them lived in slums. In effect, civilian famine was used as tool of war, in total violation of the Geneva Conventions that are designed to protect civilian populations in times of war.

Herbicides were directed extensively at the coastal mangrove forests, the main breeding grounds for many fish, which form a major part of the Vietnamese diet. In addition to spraying, there was an underground spill of Agent Orange in 1971 at the storage facility at Bien Hoa Air Base, causing elevated levels in sediments in a nearby river.

Agent Orange was a mix of approximately 50% each of 2,4-D and 2,4,5-T, and it was the latter component, 2,4,5-T that was

contaminated with a potent dioxin called TCDD (apologies for the acronyms). Dioxins are known to be extremely toxic. However human exposure is not only through warfare as they exist in the environments of industrialised societies, from industrial exposure, with very low background levels in human tissues. During the Vietnam War Agent Orange was produced by 7 major US chemical companies, principally Dow Chemical Company and Monsanto Company.

Dioxin concentrates in fat, so the greatest human exposure to it comes from ingestion of contaminated animal fat, such as from fish, chickens, ducks, pigs and other animal products. Think about what Vietnamese people generally eat. Fish and shrimp samples from South Vietnam from 1970 – 1973 showed markedly elevated levels of dioxin¹. This has obvious implications not only for the Vietnamese people themselves but for food exports from the country and also for visitors to the country, even though most of the country was not exposed, so it is politically very sensitive.

So what are the effects of dioxin, which is believed to have caused so much suffering for the people of Vietnam and those who fought there? Despite gaps in our knowledge there are a number of authoritative sources of information on this. The International Agency for Research on Cancer, which is an agency of the WHO, reports that “the extraordinary potency” of dioxin has been demonstrated in many animal species.

We know the following about dioxin:

- It is carcinogenic (cancer-inducing) in humans.

- Exposure has been associated with changes in immune function, liver function and thyroid function.
- Of particular concern is that the developing foetus appears to be more sensitive to its effects, especially the developing foetal reproductive, nervous and immune systems. There is a strong relationship between Agent Orange exposure and spina bifida, cleft lip and some other congenital abnormalities. Data linking birth defects in laboratory animals with 2,4,5-T led to the cessation of the spraying of Agent Orange in 1970/71.

The Institute of Medicine of the National Academy of Sciences in the US has completed a review of studies of Agent Orange (AO) and its potential effects on Vietnam veterans, and the review is updated regularly. This and other studies are used by the US Veterans Affairs in deciding which illnesses in exposed veterans to compensate. The Vietnam Red Cross has also compiled a list of diseases it considers due to AO exposure. The list contains many of the same conditions identified by the US studies, as being related to AO exposure.

The following are generally regarded as resulting from AO in those who have been exposed: they include lung and other respiratory cancers, prostate cancer, non-Hodgkin’s lymphoma, Hodgkin’s lymphoma, multiple myeloma, soft tissue sarcoma, peripheral neuropathy, type 2 diabetes and spina bifida. The US Veterans Affairs list also includes very many conditions applicable to the children of exposed female veterans in addition to spina bifida.

In Australian Vietnam veterans, we know that the rate of cancers is higher than for the

¹ Schechter Aet al. Letter, *Journal of Occupational and Environmental Medicine*. March 2002, p 218

average Australian male, especially cancers of the lung, head and neck.

How persistent is dioxin in the environment?

Between 1999 and 2001 blood samples were taken from 43 residents of the heavily sprayed South Vietnamese city of Bien Hoa, 35km north of Ho Chi Minh City (previously Saigon) as part of a Vietnam Red Cross dioxin survey. These samples were taken from men and women aged 16 to 71 years. Blood for comparison was taken from residents of Hanoi, where no Agent Orange was used. Of the 43 people, 41 of them (95%) had elevated dioxin levels in their blood.² This is most likely due to exposure to animal fats, especially fish. Women in the same region have been found to have elevated levels of dioxin in their breast milk. Elevated levels have also been found in young people born since the spraying ended approximately 40 yrs ago, and in soil and sediment from areas in the south that were sprayed, indicating persistence in the environment for decades after the spraying ended.

Were the effects known?

While chemical companies claimed ignorance of the health effects of Agent Orange, there is evidence that dioxin was known by the manufacturers to be “exceptionally toxic” as early as 1965. There is evidence from a research scientist (Dr Clary) with the Chemical Weapons branch of the US Air Force that its toxicity was known, but

because it was to be used on the enemy there was little concern.³

In 1984 US veterans brought a class action lawsuit against the chemical companies involved, resulting in a \$180 million settlement in exchange for a no-fault finding and no further lawsuits. The US government recognises a number of cancers and other health conditions as “presumably” service-related and pays benefits to the affected veterans. For the purposes of compensation, the US Department of Veterans Affairs presumes that veterans were exposed to Agent Orange or other herbicides if they served in Vietnam anytime between January 1962 and May 1975, including visits ashore or service aboard a ship in the inland waterways of Vietnam.⁴ No other proof of exposure is required.

For the Vietnamese, those who live with this toxin in their environment, there is no compensation; they are simply left to wear the consequences of the poisoning of their land by another nation, with no accountability or official recognition of the magnitude of what has been done. Attempts by Vietnamese victims to bring a lawsuit against the manufacturers of Agent Orange have been repeatedly unsuccessful. The US government insists that there is no absolute proof that Agent Orange caused health effects in the Vietnamese – a burden of proof not required by US veterans to receive compensation.

³ Documented in Dr Wayne Dwernychuk. *Hypocrisy and Intransigence – Mainstays of the Agent Orange Controversy*

⁴ US Dept of VA: Agent Orange: Disability Compensation for Related Diseases

<http://www.publichealth.va.gov/exposures/agentorange/benefits.asp> accessed 01 09 11

² Schecter Aet al. Letter, *Journal of Occupational and Environmental Medicine*. March 2002, p 218

Where to from here?

In 2002 the US and Vietnamese governments signed an agreement for human health and environmental studies to investigate the effects of Agent Orange. However the human health component became the subject of disagreements regarding protocol and eventually disintegrated

The US is involved in a \$32 million clean-up at the Da Nang air base in Vietnam, which is heavily contaminated. This is from a country that, in 2011, had a military expenditure of approximately \$711 billion, which is somewhere around \$2 billion every day on its military. Obviously cleaning up after itself, which we teach our children to do, is not a priority. In a 2009 Congressional Research Service report for the US Congress, it was stated that prospects for cleaning up the dioxin that was sprayed are complicated by a general lack of resources.

So this is a major ongoing problem for the people living in exposed areas of Vietnam, for the Vietnamese government, and for exposed military personnel. For the Vietnamese people I just want to put it in a little perspective with a few other statistics from that terrible war. The immediate effects of the war, between 1965 and 1975, on the people of Vietnam, included:

- 3 million deaths (civilian and military),
- 1 million widows,
- 800,000 orphans,
- 83,000 amputees,
- 10 million refugees and evacuees,
- 20 million bomb craters.⁵

This issue highlights the terrible price that is paid by human populations for the destructiveness of warfare. In the film of which we will now see a segment that relates to Agent Orange, a US Vietnam War veteran reflects that the war seemed not so much against the enemy as against the earth itself. The film is called "*Scarred Lands and Wounded Lives: The environmental footprint of war*", and it was made by two former Canberra residents, now living in Washington DC, Alice and Lincoln Day.

As our power to destroy becomes ever greater, our wisdom has not kept pace with it.

Thank you.

⁵ Levy and Sidel. *War and Public Health*. Oxford University Press in assoc with Am Public Health Assoc. p 219