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ENVIRONMENTAL HEALTH IN INTERNATIONAL AND EU LAW CURRENT CHALLENGES AND LEGAL RESPONSES

Edited by
Stefania Negri



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Environmental Health in International and EU Law
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Part V

**Environmental Health
in Case of Disasters and Conflicts**

Chapter 22

The Environmental and Health Impacts of Chemical Spraying: Can Law Protect Victims? The Case of Agent Orange

Anne Dang-Xuan Nguyen * and *Amandine Orsini* **

1. Introduction

What are the legal instruments allowing victims of chemical spraying to claim justice for the tort they have suffered? What may they sue for? Is it possible, besides the physical torts, to sue for the environmental destruction related to the wide scale use of these chemicals? In this chapter, we suggest elements of answers to these questions by analysing the case of Agent orange (AO) spraying during the Vietnam war. Indeed, the United States (US) Army used various types of herbicides to deprive the Vietnamese National Liberation Front (NLF) militias of forest cover and crops during 10 years (1961-1971), as part of mission *Ranch Hand*. The *Rainbow Herbicides* were manufactured at the request of the US government, by different companies, including Monsanto, Dow Chemical or Shamrock. Among these herbicides AO, named due to the orange band marking its containers, was massively sprayed in order to destroy the triple canopy jungle in South Vietnam. To comply with military demands, companies sped up AO production, thus disrespecting production norms. Such negligence led to AO dioxin-TCDD contamination. Jeanne Stellman estimates that 221kg of TCDD has been spilled over the Vietnamese territory, while 80g in potable water supply would be enough to eradicate an 8 million inhabitants' city.¹ Shortly after the beginning of AO sprayings, doctors in Vietnam started to identify the surge of rare diseases and birth defects among their patients.² Dioxin-TCDD is a

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¹ Jeanne Mager Stellman and others, 'A Geographic Information System for Characterizing Exposure to Agent Orange and Other Herbicides in Vietnam.' (2003) 111 *Environmental Health Perspectives* 321; Jeanne Mager Stellman and others, 'The Extent and Patterns of Usage of Agent Orange and Other Herbicides in Vietnam' (2003) 422 *Nature* 681.

² Fred A Wilcox, *Scorched Earth: Legacies of Chemical Warfare in Vietnam* (A Seven Stories Press 1st ed, Seven Stories Press 2011).

known carcinogen and teratogen. As such, it causes rare forms of cancers, stillbirths, birth defects (both physical and mental) and orphan diseases related to genome mutation,³ which the US government has repeatedly denied throughout the years.

After the war, several legal cases emerged to claim compensation for the endured damages, either introduced by US veterans exposed to AO, or by Vietnamese citizens and their sick children. Based on the case of AO, we will attempt to understand what victims of chemical products may file a lawsuit for. In a second part, we will oversee the reasons why asking for (war-related) chemical products' environmental and health damages is difficult.

Table 1 below shows the different trials filed against AO manufacturers throughout the decades. Besides, we also consider two consultative legal opinions. Tribunals of opinion have played an important role, but have obvious limitations due to their nature. To this day, transitional justice has not formally occurred between Vietnam and the United States, since no court has been recognized by either party of the war. The rulings that interest us here abide by existing laws and hence are useful tools for future trials, even though they are non-binding. Besides, they have their own restrictions. As tribunals of opinion, their aim is also to raise political awareness over a perceived injustice. Their interpretation of law calls for another interpretation of existing instruments (International peoples' tribunal of conscience in support of the Vietnamese victims of Agent orange, later on IPTC) or for the creation of new laws (the Monsanto Tribunal). The IPTC was settled by the International association of democratic lawyers and aimed to define the reparation victims could claim, both toward the US government and the companies, thus ignoring the issues of immunity. A proceed of the ruling was nonetheless symbolically sent to the White House⁴ The Monsanto Tribunal, held in 2016 by international jurists and civil society organisations stated Monsanto could be sued for ecocide for its deeds in Vietnam, if only ecocide was written as a crime of international law.⁵ Finally, their highly symbolic and partisan charge may discredit further attempts to obtain justice through regular courts.

³ Eva Kramárová and others, 'Exposure to Agent Orange and Occurrence of Soft-Tissue Sarcomas or Non-Hodgkin Lymphomas: An Ongoing Study in Vietnam.' (1998) 106 *Environmental Health Perspectives* 671.

⁴ André Bouny, *Agent orange: apocalypse Viêt Nam* (Éditions Demi-Lune 2010).

⁵ *Summary of the advisory opinion of the International Monsanto Tribunal* 6 (International Monsanto Tribunal).

Date	Parties	Motives	Status
Trials			
1978-1985	<i>Paul Reutershan v. Monsanto et al. Then, Agent Orange Victims International (AOVI) v Monsanto et al.</i> 15'000 plaintiffs from the United States, Australia and New Zealand	Mass tort action	Jurisdiction: New York Eastern District Court Judge: Jack B. Weinstein Ruling: Out of court settlement, \$180 M of granted by Monsanto <i>et al.</i> (goodwill based) No ruling, hence no precedent ⁶
1986-2013	<i>Korean Association for Victims of Agent Orange (KAOVA) v Korean branches of Monsanto et al.</i>	Mass tort class action	Jurisdiction: Korean Supreme Court Ruling: Recognition of chloracne as caused by AO exposure. Condemnation of Korean branches of Monsanto and other companies. Compensation to 39 Korean Vietnam War Veterans for diseases suffered following exposure to herbicides. \$41M in compensation.
2004-2008	<i>Vietnamese Association for Victims of Agent Orange/Dioxin (VAVA) v Dow et al.</i>	Violations of international law and war crime (war crime, crime against humanity, genocide) Negligent and international tort under the common law for products' liability Civil conspiracy, public nuisance and unjust enrichment, causing personal injuries, wrongful death and birth defects	Jurisdiction: New York Eastern District Court (Alien Tort Claim Act) Judge: Jack B. Weinstein, US Court of Appeals for the Second Circuit, Supreme Court Ruling: Rejected. The jury of the Supreme Court considered Monsanto produced a defoliant, which aim was to harm the forest cover, and not human beings ⁷ .
2015-	<i>Trần Tồ Nga and daughters v Monsanto et al.</i>	Motive: Health damages caused by tort committed in the manufacturing and	Jurisdiction: Evry High Court (France) Status: Ongoing

⁶ Peter Sills, *Toxic War: The Story of Agent Orange* (Vanderbilt University Press 2014).

⁷ Jack B Weinstein, Memorandum, order and judgement 2005, 233.

	Subsequently the “Evry trial” or “Evry lawsuit”	provision of the defoliant AO to the US Armed Forces ⁸ .	
Consultative legal opinions			
2009	<i>International Association of Democratic Lawyers</i> <i>27 victims of AO (Vietnamese, American, Korean) v. Monsanto et al.</i> Subsequently the “IP/TC case”	War crimes Crimes against humanity Violation of the right to life	Body: The International peoples’ tribunal of conscience in support of the Vietnamese victims of AO AO is a poisonous weapon. Thus, the US violated the laws of war and committed war crimes in Vietnam. The manufacturing companies are complicit of war crimes. The American government is guilty of crime against humanity for it did not discriminate civilians from combatants, inflicted unnecessary sufferings over several generations, thus violating the Geneva Conventions and its 1977 Protocol. Violation of the right to life. ⁹
2016	Legal opinion Is Monsanto guilty of complicity of war crime? Could the past action of Monsanto be considered as ecocide? Subsequently the “Monsanto tribunal”	Complicity of war crimes Ecocide	The dais deems that there is not enough proof to rule Monsanto as a complicit of war crime for the production of AO. Moreover, Monsanto, as a legal person, cannot be held liable for war crimes (Rome Statute), for which the court called in favour of extending the liability to legal persons. If ecocide was considered a crime under international law, Monsanto would be guilty of such a crime ¹⁰ .

⁸ Sandra Orus and Dounia Belua, Ordonnance 2015 [14/04980].

⁹ Bouny (n 4); *Judgement of the International peoples’ tribunal of conscience in support of the Vietnamese victims of Agent orange* 32 (International peoples’ tribunal of conscience in support of the Vietnamese victims of Agent orange).

¹⁰ *Summary of the advisory opinion of the International Monsanto Tribunal* (n 5).

2. Claims

By crossing over the different trials, we can identify three main types of claims made by plaintiffs. We analyse them one by one in this part.

2.1. Sanitary Impacts Constitutive of Crime Against Humanity and War Crime

2.1.1. Physical and Health Impacts During and After the Conflict

Among the claims of the various trials, inflicted physical and health impacts have been the most important ones. In the *KAOVA v Monsanto et al.* lawsuit (the only litigation that led to a compensation), it was the motive retained by the Korean Supreme Court, asking for veterans who were exposed to AO to be compensated for their chloracne outbreaks (the Seoul District court first accepted 11 diseases, but the decision was overturned).¹¹ Immediate health impacts such as headaches, fatigue, severe skin rashes, were declared in the *VAVA v Dow et al.* case¹² as well as the ongoing *Evry* litigation¹³ with no compensation however.

In the *KAOVA v Monsanto et al.* trial, chloracne was perceived by the court as a direct result of dioxin-TCDD exposition as demonstrated by several scientific studies.¹⁴ Scientifically-evidenced harm of chemical products is likely to be accounted for, although this success is to be nuanced: a positive relation between chloracne and AO has been recognized by courts only after the results of dioxin trials. Moreover, this link is not necessarily straightforward:¹⁵ after more than 30 years of trials, only a minority of plaintiffs could convincingly attest of one precise affliction in front of a lawcourt and be compensated. Meanwhile, the harm done by dioxin exposure may appear years after exposure, thus complicating the provision of evidence regarding physical harm.

For instance, in the *AOVI v Monsanto et al.* case, Paul Reutershan, the first person to file a complaint against Monsanto, did so by linking his rare form of cancer to AO exposure, claiming compensation for health damages appearing after the war. The class action that ensued, as a mass tort claim, was based on a wide array of health impacts, ranging from personal injury to cancers. The wives and children of servicemen

¹¹ Justine Guichard, 'The Conflictual Legacy of South Korea's Participation in the Vietnam War Veterans' Struggles for Victimhood Recognition and Denial' (2016).

¹² Constantin P Kokkoris, Preliminary statement 2004, 48.

¹³ Orus and Belua Ordonnance (n 8).

¹⁴ Sills (n 6).

¹⁵ Guichard (n 11).

were also mentioned, for miscarriages, birth defects or still births. None of the accusations were retained, for the trial was settled out of court. Judge Weinstein concluded there was not enough proof to link AO/dioxin exposure to health ailments in servicemen and their children.¹⁶ Up until now, activists in the US are still accused of pointing out “old age and life style diseases” as dioxin-related.¹⁷ The same judge ruled the 2004 *VAVA v Dow et al.* case, where post-conflict, post-exposition afflictions were underlined by Vietnamese victims. Providing testimonies and proofs on skin diseases and extreme fatigue, they also provided accounts of rare forms of diseases (mostly cancers), asking companies producing AO to be held accountable for these diseases.¹⁸ Scientific proofs brought to Weinstein led the judge to rule out the evidences brought by Vietnamese victims for lack of statistical evidence, especially years after the war.¹⁹

Afflictions related to the long-term toxicity of some chemical products are difficult to sue against, as the causal links are difficult to prove. In the *Evry* lawsuit, the plaintiff mentioned a list of health issues she deems related to her exposure to chemicals.²⁰ These issues either appeared shortly afterward, affected her daughters, or broke out decades after her exposure (from chloracne to rare forms of anaemia).²¹ The burden of proof to attest the link between AO and diseases is both financially and scientifically heavy, because of the lack of complete knowledge on AO and on its historical use.

While official jurisdictions were careful in the consideration of health impacts occurring after the war, opinion tribunals, such as the Monsanto Tribunal or the IPTC, considered the damages suffered by victims during and after the war as violations of international law as a matter of principle but without leading to effective condemnations.

Another important trend observed is that health impacts have been coupled with international humanitarian law as AO was used during an international conflict.

2.1.2. *Crime Against Humanity and War Crimes*

According to the proceeds of the Nuremberg trial and the 1998 Rome Statute, the conscious, systematic, inhumane and widespread attacks against civilians for in war

¹⁶ Sills (n 6).

¹⁷ Interview with Paul Cox, ‘US Veteran, Member of Vietnam Veterans for Peace’ (Berkeley, United States of America, 30 July 2017).

¹⁸ Kokkoris Preliminary statement (n 12).

¹⁹ Jack B Weinstein Memorandum, order and judgement (n 7).

²⁰ Orus and Belua Ordonnance (n 8).

²¹ Arnaud Vaulerin, ‘Tran To Nga, une vie empoisonnée’ *Libération.fr* (24 October 2018) <www.liberation.fr/planete/2018/10/24/tran-to-nga-une-vie-empoisonnee_1687642> accessed 13 January 2019.

constitute crimes against humanity. In several trials, the use of AO was considered as such by the plaintiffs. For those of 2004 *VAVA v. Dow et al.*, sprayings caused at least physical and mental harm that could be considered as torture and wilful atrocities against civilians, recalling the Nuremberg rulings and the 1907 Hague Conventions.²² This was however rejected altogether by the dais. Crime against humanity was tackled by IPTC, which judges ruled spraying herbicides as an inhumane treatment of civilians according to the Nuremberg Principles, considering the pain, anguish and suffering they have caused and will cause “over generations”.²³ Chemical warfare for the indiscriminate, superfluous suffering it inflicted, was hence recognized by the jury as a crime against humanity. However, no effective court has yet recognized this wider interpretation of laws.

Furthermore, according to the Rome Statute, using poisonous weapons, asphyxiating gases and analogue products, as well as not distinguishing civilians from combatants, is constitutive of war crimes. Victims of chemical attacks may hence sue with these legal tools, if the defendant is also a party to the Statute. In the case of AO victims, only the Geneva conventions and the Hague Treaties of 1907, domestic laws (Vietnamese and Americans) as well as international customary laws could be relevant.

Through the various trials, one of the most disputed elements was to attest that AO is a chemical weapon and not a simple licit herbicide as affirmed by defendants. In the 2004 *VAVA v Dow et al.* case, plaintiffs attempted to prove that the US government was guilty of war crimes, and the companies responsible of complicity to these crimes, by proving that AO could be considered as a weapon forbidden by the Geneva conventions, the Hague conventions and customary law. According to Price, chemical weapons, by their nature and effect, would already be forbidden.²⁴ Besides the unnecessary suffering, poisonous gases and liquids do not allow distinction between military and civil targets as provided by the Geneva Conventions, even though the areas sprayed were marked as strictly controlled by NFL militia. First, the insurrectional character of the Vietnam war meant that guerrillas hid in densely populated civil areas. It was hence impossible to distinguish combatants from civilians, nor was it possible to distinguish their crops. Second, because of droplet drifts, herbicides particles unavoidably fell on civilian areas.²⁵ Third, because the ongoing pollution, in times of peace, mostly affects civilians.

War crimes accusation appeared in *Dow et al.* trial in 2004^{26, 27} but were never recognized. Beside this case, plaintiffs did not point at war crimes. In the 1978-1985

²² Kokkoris Preliminary statement (n 12).

²³ 1976 *Judgement of the International peoples' tribunal of conscience in support of the Vietnamese victims of Agent orange* (n 9).

²⁴ Richard Price, 'Reversing the Gun Sights: Transnational Civil Society Targets Land Mines' (1998) 52 *International Organization* 613.

²⁵ Sills (n 6).

²⁶ Weinstein Memorandum, order and judgement (n 7).

²⁷ Kokkoris Preliminary statement (n 12).

class action, many US veterans did not want to sue their state (some of whom out of patriotism), nor to condemn it for war crimes. They mostly needed to cover the health fees engendered by their service.²⁸ In the case of *VAVA*, the demography of plaintiffs (Vietnamese people, including former NLF militants), as well as the support network behind them (Vietnamese government, Vietnamese NGOs, Vietnamese Friendship associations), explains the content of the accusations. Later on, the qualification of AO as an illegal, chemical weapon was adopted by the IPTC (Judgement of the IPTC in support of the Vietnamese victims of AO 2009) as well as by the Monsanto Tribunal²⁹. Again, the aim of these tribunals explains the strengths of their rulings compared to official courts, but their reasoning could be used in other trials against perpetrators of chemical attacks.

2.2. *Environmental Destruction*

Before sanitary damages were linked to AO sprayings by doctors, activists and plaintiffs, the extensive environmental destruction stirred indignation from the public. A 1969 report from a study conducted by two US scientists already pointed out irreversible environmental damages on Vietnamese ecosystems.³⁰ These are the only damages officially recognised by the US and cooperative clearing operations are currently undertaken by the US and Vietnamese governments. A first site has been cleared (the Da Nang airbase), and two others are currently in progress (Bien Hoa and Phu Cat airbases). Still, many civilians living around contaminated areas are at risk of water and food borne contamination, and the defoliation has had disastrous consequences on the biodiversity.

During the sprayings, up to 10% of the current Vietnamese territory had been affected by herbicide pollution. Currently, there are several “AO hotspots”, where the concentration of dioxin is high because of herbicide drums’ storage.³¹ The defoliated areas included triple canopy jungles and mangroves, which are essential to protect from coastline erosion. Therefore, herbicides sprayings could be qualified as environmental destruction. While operation *Ranch Hand* undoubtedly shaped the way states currently deal with environmental protection during wars, it happened at a time no laws existed to prevent irremediable ecosystem damages. The 1977 Additional Protocol to the Geneva Conventions limits the permitted damages to the environment during interna-

²⁸ Sills (n 6).

²⁹ *Summary of the advisory opinion of the International Monsanto Tribunal* (n 5).

³⁰ David Zierler, *The Invention of Ecocide: Agent Orange, Vietnam, and the Scientists Who Changed the Way We Think about the Environment* (University of Georgia Press 2011).

³¹ James T Durant and others, ‘Public Health Assessment of Dioxin-Contaminated Fish at Former US Airbase, Bien Hoa, Vietnam’ (2015) 25 *International Journal of Environmental Health Research* 254; Thomas Boivin and others, ‘Agent Orange/Dioxin Contamination in the Environment and Food Chain at Key Hotspots in Vietnam: Da Nang, Bien Hoa and Phu Cat’ 5.

tional conflicts. The 2002 Rome Statute of the International Criminal Court (ICC) considers attacks that intentionally inflict disproportional, widespread and long-term damages to the environment as war crimes. In addition, Galston, who coined the term “ecocide”, did so by attesting the destruction in Vietnam.³² A few years later, and as a response to the use of AO during the Vietnam war, the United Nations (UN) pushed forward and adopted the Convention on the Prohibition of Military or any other hostile use of environmental modification techniques, known as the ENMOD convention. For Vietnamese victims of AO, these treaties were adopted too late, since the sprayings stopped five to six years before. These laws cannot be summoned retroactively in trials, but can be for other cases later on (for instance, against the use of depleted uranium around the city of Fallujah or the use of defoliants by the Israeli Defence force on the Gaza strip), if states involved are parties to the treaties.

Moreover, not much more is provided by written international law in terms of the use of herbicides. The 1969 UN General Assembly (UNGA) banned the use of herbicides and riot control agents in times of war through resolution 2603. This instrument has however not reached consensus, due to abstentions (36) and the negative vote of 3 UNGA member states. It was precisely discussed and voted during the Vietnam War and hence labelled “partisan” by the US administration.³³ Dean Kokkoris, the lawyer of the Vietnamese victims of AO in the 2004-2008 lawsuit called upon resolution 2603, but it was ruled non-binding, heavily polarized due to the Cold War context and not applicable to private actors.³⁴

Looking at tribunals of opinion, the Monsanto tribunal jury stated that if ecocide could be considered as a crime, Monsanto would be guilty of committing it. Nothing now prevents victims to sue for pollution or ecocide to establish a precedent. Nevertheless, in the state of existing law, ecocide is still not a crime one may sue for.

2.3. State and Corporate Responsibility

When the *AOVI v Monsanto et al.* case started, Paul Reutershan aimed at suing the US government. However, Washington D.C made use of its state immunity and could, as such, only be sued by a court it recognized capable of doing so. Companies could not benefit from this immunity and corporate responsibility could be called upon.

In the 2004 *VAVA v Dow et al.* trial, the plaintiffs demanded that the complicity of companies, their negligence and unjust enrichment be compensated. Based upon the extensive damages declared by the victims in the various trials, the claims for immediate damages were retained.

³² Zierler (n 30).

³³ Sills (n 6); Zierler (n 30).

³⁴ Weinstein Memorandum, order and judgement (n 7).

If plaintiffs could prove that the perpetrators knew about the toxicity of the chemical products, then the US could be ruled guilty of a breach of international law (the Geneva conventions), and the companies could then be held accountable for providing toxic products to their clients. However, this point has never been recognized by any effective court, although lawyers of victims such as Peter Sills affirm there was no way chemical manufacturers were oblivious of the consequences of dioxin exposure. This line of argumentation has been repeated in all trials up until now. It is however difficult to find tangible cases and similarities, due to the different legislations under which AO trials were ruled. Also, only the *KAOVA v Monsanto et al.* case led to compensation for damages, based upon studies conducted in the US.³⁵

Overall, barriers exist to the recognition of these different claims. We look at these barriers in the next part.

3. *Social and Legal Obstacles*

3.1. *Agent Orange, “Just” an Herbicide*

First, AO is not considered as a chemical weapon but as an herbicide. This has been a recurrent argument to dismiss claims for compensation by victims of sprayings. AO has indeed been presented as an herbicide from the beginning of the Vietnam war³⁶ and has been reiterated as such by the American jurisdiction,³⁷ being therefore considered licit. Although one is dealing with the particular case of AO, technicalities of weapons' systems have often been used to doge accusations of weapons' ban violation. AO, white phosphorus, depleted uranium ammunitions used during the 2nd Gulf War happen to be accidentally chemical. As stated by Richard Price, the issue with weapon-specific jurisdiction is the escape clauses it creates. According to him, a strict interpretation of the founding texts of international humanitarian law would provide protection against indiscriminate attacks causing superfluous and unnecessary suffering caused by some weapons. In case specific weapons are banned, it is a matter of time before military innovation makes a convention obsolete.³⁸

While not leading to a formal judicial verdict, the different trials led to the construction of arguments disqualifying AO as a chemical weapon, for its purpose was to harm plants, not human beings. Moreover, chemical companies and the US government have defended their actions by stating their ignorance about the toxicity of the herbicide. Although the lawyers of the plaintiffs insist that manufacturers were aware

³⁵ Guichard (n 11).

³⁶ Zierler (n 30).

³⁷ Weinstein Memorandum, order and judgement (n 7).

³⁸ Price (n 24).

of the hazards, the proofs are insufficient to establish their knowledge of hazards and their intention to harm human beings.³⁹

AO is a specific case but resembles depleted uranium, as it affected human beings while mainly targeting the environment or infrastructures. The full range of consequences over people's health unfolds years after, thus making the link between diseases and their primary cause difficult to prove, and hence to rule. Other types of chemical products, those with immediate and more visible effects, will not face the same difficulties undergone by those suing for AO related afflictions. Looking at different cases in which long-term poisoning was recognized (such as asbestos), a fair share of activism was necessary⁴⁰ to have long term health ailments recognized. Civil society support is positive for victims (provision of a support network, legal counseling as well as increased transnational visibility of the trial) but it can discredit attempts to obtain justice by apparently tainting lawsuits with partisanship.

3.2. State Immunity and Applicability of Laws

In any case, because the use of chemical weapons is a war crime, only states and individuals may be sued for it, not companies. The former may benefit from *de facto* or *de jure* immunities, which has made suing the US for their use of chemical weapons impossible up to now. While state apparatus takes the decision to conduct wars and to utilize contested weapons, it is difficult to sue them due to their sovereign immunity.

In the case of AO, the US government invoked its sovereign immunity. According to this clause, it may only stand in a lawsuit if it consented to⁴¹. This has prevented the plaintiffs to sue the government, and hence led them to sue the manufacturing companies. Moreover, by the time of the sprayings, the US had not yet ratified the Geneva Gas Conventions (they only did in 1972)⁴² and the 1993 Chemical Weapons Convention did not exist at this time. While AO sprayings contributed to the adoption of ENMOD or of the UNGA 2603 resolution, these instruments were available too late or did not gain unanimous support to be accounted as customary laws by US courts.⁴³

Since the US neither recognizes the International Court of Justice, nor the ICC, the only way victims could sue for their plight was by doing so in the US (*AOVI v Monsanto et al.*), or by using extra-territorial competences of national courts. This

³⁹ Sills (n 6).

⁴⁰ Emmanuel Henry, *Amiante, un scandale improbable: sociologie d'un problème public* (Presses universitaires de Rennes 2007).

⁴¹ Richard A Roth, 'The Essence of the Agent Orange Litigation: The Government Contract Defense' (1983) 12 Hofstra Law Review 983.

⁴² Zierler (n 30).

⁴³ Weinstein Memorandum, order and judgement (n 7).

was the case of the *VAVA v Dow*: the plaintiffs used the Alien Tort Claim Act, which allows foreigners to sue an American physical or moral person if they committed infraction against them.⁴⁴ In the *Evry* trial, Tran To Nga, a French national, invoked the competence of French magistrates to settle international law related cases if a French citizen is involved in the dispute.⁴⁵ In the case of *KAOVA v Monsanto et al.*, the Korean veterans sued the Korean wings of the multinationals under Korean law, because they struggled doing so on the American territory.⁴⁶

Immunities put a limit on *what* plaintiffs may sue for. Since private companies may not be sued for war crimes (only having legal personhood) according to the Rome Statute, this limits the range of laws applicable. In all the cases detailed in Table 1, it was not possible to sue and condemn private individuals for war crime or crime against humanity,⁴⁷ although they could be charged as accomplices.

3.3. *Proofs as Burdens*

In order to be able to sue manufacturers, plaintiffs in AO litigations need to bring proof backing their claims. With time passing by, attesting that a victim has been sprayed, and thereafter suffered diseases is financially costly, if not impossible due to the social situation of victims. It is difficult to prove that the US government intended to harm people by spraying herbicides. Several maps provided by the US government are available but proving exposure has been tricky, considering the drifts during the spraying (up to 100 km away) and the mobility of soldiers in and out of spraying areas.⁴⁸ Adding to this, accounting for the link between parental exposure and birth defects is subject to an ongoing controversy. All in all, the burden of proof on victims is heavy. In the *Evry* trial for instance, the evidence requested included documents attesting the plaintiff's presence in sprayed areas, proving the non-combatant status of the plaintiff, as well as certifying health afflictions (some of which occurred as she was an inmate in South-Vietnamese jails and were solved ever since). The provision of these documents was requested by the defendants and has lengthened the judicial procedure, even though the jury ruled some of the demands unreasonable.⁴⁹

⁴⁴ Felix Klickermann, 'Legal Liability for Agent Orange-Related Illnesses: A Reassessment of the 2005 VAVA Case and Prospects for New Litigation' (2016) 32 *Medicine, Conflict and Survival* 138.

⁴⁵ France Inter, 'Tran To Nga, le parcours d'une combattante', *D'ici, d'ailleurs* (10 December 2016) <<https://www.franceinter.fr/emissions/d-ici-d-ailleurs/d-ici-d-ailleurs-10-decembre-2016>> accessed 13 January 2019.

⁴⁶ Guichard (n 11).

⁴⁷ *Summary of the advisory opinion of the International Monsanto Tribunal* (n 5).

⁴⁸ Sills (n 6).

⁴⁹ Interview with Tô Nga Trần, 'Plaintiff of Nga Tran v. Monsanto et al., former Vietnamese war correspondent' (Ho-Chi-Minh-City, Vietnam, 4 July 2016).

Moreover, the financial cost to obtain a certificate linking health ailments and exposure is costly. At \$1000 per sample of blood and fat tissues, many victims do not have the capacity to pay for these screenings, nor to remunerate lawyers and translators. Most lawsuits listed were made possible through heavy civil society involvement (Vietnam Agent Orange Responsibility and Relief took care of the plaintiffs while they were in the US), including fundraising (Tran To Nga used fundraising platforms to pay for translation fees) and voluntary works by lawyers.

The AO case is particular, owing to its span of action and blurred notion of intention. The intention to harm is more obvious in the use of other types of weapons (white phosphorus obviously causes burns, for instance). Again, its consequences bear similarities with uranium exposure out of nuclear tests⁵⁰ or depleted uranium ammunitions.⁵¹ While suffering crippling health conditions, neither French military staff working on test sites nor American soldiers serving in Iraq managed to gain recognition of the link between their condition and their exposure to hazardous substances.

Moreover, these difficulties could only be faced if victims survived from the war and war-related afflictions. AO does not harm instantly in a tangible way. After the Vietnam war, survivors of AO sprayings found themselves sick, or repetitively gave birth to ill children, thus contributing to their pauperization and isolation.⁵² Among them, a minority of victims could find the social resources to sue companies, and many died during the legal procedure, for instance during the *VAVA v Dow et al.* lawsuit⁵³ and the *KAOVA v. Monsanto* case in Korea (out of which only 39 veterans were compensated).⁵⁴ The burden of proof therefore weights on mostly marginalized victims, who cannot bring all evidence pieces to their own trials.

3.4. “I will never be able to marry”, or the Social Costs of Victimhood

The social burden has often been underlined either by victims or researchers working on AO. “I will never be able to marry” was the complaint of a teenage girl, with several sick siblings. Their parents had served during the war in heavily sprayed areas and were beneficiaries of Vietnamese state support programs.⁵⁵ This expresses the social cost of victimhood, which deters witnesses and victims from speaking about their plights.

⁵⁰ Bruno Barrillot, *Les irradiés de la république: les victimes des essais nucléaires français prennent la parole* (Grip 2003).

⁵¹ Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Harvard University Press 2011).

⁵² Michio Umegaki, Lynn Thiesmeyer and Atsushi Watabe (eds), *Human Insecurity in East Asia* (United Nations University Press 2009).

⁵³ Wilcox (n 2).

⁵⁴ Guichard (n 11).

⁵⁵ Interview with Public Health Official, Covered Identity (Hanoi, Vietnam, 26 April 2018).

Affecting gonads, dioxin exposure causes birth defects and congenital health ailments. In traditional societies such as rural Vietnam, marriage and childbirth are important milestones. Because of their exposure to herbicides during the war or afterward, while living and/or working in polluted areas, some parents gave birth to sick children. In order to save the marital prospects for their healthy family members, and to avoid the social stigma of having heavily handicapped children, some chose not to declare their afflictions, while knowing it may be related to dioxin exposure. Suing, in this case, would mean accepting and embodying one's status of victim, bringing suspicions on one's children and grand-children to bear healthy offspring. Moreover, some believe being affected by heavy health ailments or giving birth to sick children is due to their karma. Wishing to avoid social exclusion, some do not accept or request social benefits they would be entitled to,⁵⁶ let alone suing to gain justice on the international level.

3.5. Politicization of the Agent Orange Trials

Last but not least AO, as a remnant of war issue, is politically charged both in Vietnam and in the US, which complicates attempts of victims to claim justice without being instrumentalized by either party to the Vietnam war. As a war-remnant issue, dioxin pollution has been the subject of difficult negotiations between the US and Vietnam and is still one of the most crucial points on the bilateral agenda. As a Cold War issue, it bears an important partisan dimension up to now, and is conditioned by US-Vietnam relations. Since the normalization and reestablishment of diplomatic ties between Washington and Hanoi, and while much progress had been done on the issue, dioxin pollution remains a sensitive issue.

The different trials have had a toll on the political exchanges between the two countries. Currently, the question of AO sanitary liability is not welcomed in an agenda packed with defence agreements deemed crucial by both partners, besides the different trade agreements linking them together. As a result, AO has become a heavily controlled issue in Vietnam, and Hanoi keeps a tight surveillance on research centres and hospitals alike. While VAVA is an NGO catering for victims, it remains intimately linked to the Vietnamese government, thus restricting Vietnamese victims' ability to sue. The only lawsuit involving Vietnamese citizens was made possible by the creation of VAVA, which leadership is composed by former Vietnamese high officials. For the Vietnamese victims, there is hence no other way to claim justice than going through their government, which is supportive toward them on the national scale, but does not have the leverage to do so on the international level. Trials such as this of Evry are hence encouraged, but not too eagerly, by the Vietnamese government. The access to courts by Vietnamese victims is hence compromised by the political agenda on defence and trade.

⁵⁶ Interview with Public Health Official II, Covered identity (Hanoi, Vietnam, 24 June 2018).

4. Conclusion

This chapter has analysed the different claims and results of all litigations related to the use of Agent orange, an herbicide, during the Vietnamese war. Claims have included issues of sanitary impacts, environmental degradation, and state and corporate responsibility. Overall, very few of these claims have been recognised as valid: AO has been considered as an herbicide, not a chemical weapon, states have benefited from immunity, the practical costs of scientific evidence impeded plaintiffs to fully inform their cases, social costs have been high and the AO issue is full of broader political tensions. For these reasons, AO victims have struggled to effectively file lawsuits to claim for justice.

The AO case enables us to draw some more general observations with regard to the possibility that victims of chemical products can have to make their voice heard in case of environmental and health impacts. Recent cases such as the glyphosate case could benefit from a parallel with AO. For instance, French civil society actors supporting the Evry trial have claimed taking example on AO as a “dystopian case” to push for a ban on endocrine disruptors.⁵⁷ First, tribunals of opinions, and this is also part of their role, are more favourable for new claims to be heard. They could be considered as first steps towards stronger litigations. Second, the costs of litigation should be considered and plaintiffs could be helped overcoming these costs. In particular, social repercussions are a new type of costs identified by our study that would be highly relevant when environmental and health issues impact marginalised populations. Third, the political dimension of environmental and health litigations should not be underestimated. Ideally litigations should be preserved from political struggles or at least these struggles be made clearer.

⁵⁷ Interview with Jean-Louis Roumegas, ‘Former French MP, Green Party’ (Montpellier, France, 27 February 2018).