



## Violence as an impediment to achieve Sustainable Development

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**KEYWORDS** : War, Non-violence, Ecological balance.

Each year, over 1.6 million people worldwide lose their lives to violence. Violence is among the leading causes of death for people aged 15-44 years worldwide, accounting for 14% of deaths among males and 7% of deaths among females. Moreover, violence places a massive burden on national economies, costing countries billions of US dollars each year in health care, law enforcement and lost productivity.

War or non violence as a human activity is inherently unsustainable either socially or ecologically. Violence in today is growing and expanding in all over the world, generating an atmosphere of fear, uncertainty, untouchability and claustrophobia. We experience not only the physical violence of war and crime, but also economic, racial, religious, psychological, domestic-family and internal violence. There are evidences that violence is a great obstacle to sustainable development. Violence or wars not only disturbs the human beings but also affect the balance of ecological system. Therefore, the mantra (magic) for saving and make the resource sustainable is the Non Violence or peace. There is inevitable relationship between peace and sustainable development. Non violence is not pacifism and it isn't just a simple methodology for marches or other actions. More importantly non-violence is not the resigned attitude of those who avoid conflict and graveness out of fear. Non violence is a great life philosophy and method for taking action. It has always been inspired by deep moral and religious convictions and today it is the only coherent answer to the spiral of violence surrounding the entire world. We need to opposed to all types of violence, and not only to the one most spectacular form, namely armed conflicts between or within state actors that we refer to simply as "war". The quest for personal peace is bound up with the aim of achieving a peaceful society, and this can only be attained when society as a whole is striving to exist in a reciprocal and harmonious manner with the balance of life and the extra-human world. In this paper we analyzed that deeply concerned individuals are doing very cogent work on environmental issues, yet somehow the same energies are not as clearly brought to bear on the war system, which we note does as much as or more than any other single human activity to destroy the environment.

### PURPOSE OF THE STUDY

- 1. The motive behind this study is to get an insight of the loss to environment due to wars and to find out a solution for sustainable development.**
- 2. The research is aimed towards exploring the living conditions, war aftermath and measures taken by the government.**

"Warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary." – 1992 Rio Declaration

War means destruction of life, resources and humanity. Starting from the Mahabharata to World wars we do not gained anything but

lost many things. The application of weapons, the destruction of structures and oil fields, fires, military transport movements and chemical spraying are all examples of the destroying impact war may have on the environment. Air, water and soil are polluted, man and animal are killed and numerous health affects occur among the people who live in those wars affected areas. This paper is about the environmental loss due to wars and attraction towards the solution i.e. Non Violence. Unfortunately the world has seen many wars striking the environment very badly which includes loss of biodiversity, famine, sanitation problems at refugee

**World War I: Trench Warfare** – The Great War in 1914, the assassination of archduke Franz Ferdinand of Austria-Hungary resulted in the First World War. It started with Austria-Hungary invading Serbia, where the assassin came from, and Germany invading Belgium. The war was mostly in Europe, between the Allies and the Central Powers.

**Allies:** France, United Kingdom, Italy, Belgium, Luxembourg, Russia, Poland, Serbia, Montenegro, Rumania, Albania, Greece, Portugal, Finland, United States, Canada, Brazil, Armenia, Australia, India, New Zealand, South Africa, Liberia, China, Japan, Thailand, Guatemala, Haiti, Honduras, Nicaragua, and Panama

**Central Powers:** Austria-Hungary, Germany, Turkish Empire, and Bulgaria.

Half of the world was involved in it; the war was fought from trench, dug from the North Sea to the border of Switzerland. In 1918 when the war was over, empires disintegrated into smaller countries, marking the division of Europe today. Spanish Flu was outbreak and it killed over 7 million people. The war did not directly cause the influenza outbreak, but it was amplified. Mass movement of troops and close quarters caused the Spanish Flu to spread quickly. Furthermore, stresses of war may have increased the susceptibility of soldiers to the disease.

**Impact on Environment:** If we look into the environmental impact, World War I was most damaging, because of landscape changes caused by trench warfare. Digging trenches caused flatten of grassland, crushing of plants and animals, and churning of soil. Erosion resulted from forest logging to expand the network of trenches. Soil structures were altered severely, and if the war was never fought, in all likelihood the landscape would have looked very differently today.

Another damaging impact was the application of poison gas. Gases were spread throughout the trenches to kill soldiers of the opposite front. Examples of gases applied during WWI are tear gas (aerosols causing eye irritation), mustard gas (cell toxic gas causing blistering and bleeding), and carbonyl chloride (carcinogenic gas). The gases caused a total of 100,000 deaths, most caused by carbonyl chloride (phosgene). Battlefields were polluted, and most of the gas evaporates into the atmosphere. After the war, unexploded

ammunition caused major problems in former battle areas. Environmental legislation prohibits detonation or dumping chemical weapons at sea, therefore the cleanup was and still remains a costly operation. In 1925, most WWI participants signed a treaty banning the application of gaseous chemical weapons. Chemical disarmament plants are planned in France and Belgium.

**World War II: Gas Chambers** – World War II was a worldwide conflict, fought between the **Allies** (Britain, France and the United States as its core countries) and the Axis Powers (Germany, Italy and Japan as its core countries). It started with the German invasion of Poland and Czechoslovakia in 1939, and ended with the liberation of Western Europe by the allies in 1945.

**Hiroshima & Nagasaki nuclear explosions** Atomic bombs are based on the principle of nuclear fission, which was discovered in Nazi Germany in 1938. During the process, atoms are split and energy is released in the form of heat. Controlled reactions are applied in nuclear power plants for production of electricity, whereas unchecked reactions occur during nuclear bombings. The invention in Germany alarmed people in the United States, because the Nazi's in possession of atomic bombs would be much more dangerous than they already were. When America became involved in WWII, the development of atomic bombs started there in what was called the 'Manhattan Project'. In July 1945 an atomic bomb was tested in the New Mexico desert. The tests were considered a success, and America was now in possession of one of the world's deadliest weapons.

**Impact on Environment:** Between 1941 and 1945, over 1 million people were killed in the gas chambers of the extermination camp Auschwitz-Birkenau in Nazi Germany. Over 90% of the victims were Jews, and the other 10% consisted of Poles, Soviet prisoners of war and gypsies. The substance applied was **Zyklon-B**, a cyanide-based insecticide that is lethal to humans in large doses. It was stored as crystals in closed containers, but when exposed to air it released the lethal hydrogen cyanide gas (HCN). As Zyklon-B was poured into the gas chambers through small openings, it took only 10-15 minutes to kill all people inside.

The insecticide was supplied to Nazi Germany by two firms, Tesch-Stabenow and Degesh. After the war the firms claimed they were unaware of the application of the product to kill people in large numbers. However, it was later stated that the company had to have known, because they supplied enough substance to kill 2 million people, and additionally gave some advice on how to use the ventilating and heating equipment.

In 1945, at the end of World War II and the beginning of the Cold War, nuclear weapons were applied to kill for the first time in Japan. On August 6, a uranium bomb by the name of Little Boy was dropped on Hiroshima, followed by a plutonium bomb by the name of Fat Man on Nagasaki on August 9. The reason Hiroshima was picked was that it was a major military centre. The bomb detonated at 8.15 p.m. over a Japanese Army parade field, where soldiers were already present. Nagasaki was picked because it was an industrial centre. The bomb, which was much larger than that used on Hiroshima, exploded at 11.02 a.m. at an industrial site. However, the hills on and the geographical location of the bombing site caused the eventual impact to be smaller than days earlier in Hiroshima.

The first impact of the atomic bombings was a blinding light, accompanied by a giant wave of heat. Dry flammable materials caught fire, and all men and animals within half a mile from the explosion sites died instantly. Many **structures collapsed**, in Nagasaki even the structures designed to survive earthquakes were blasted away. Many water lines broke. Fires could not be extinguished because of the water shortage, and six weeks after the blast the city still suffered from a lack of water. In Hiroshima a number of small fires combined with wind formed a firestorm, killing those who did not die before but were left immobile for some

reason. Within days after the blasts, radiation sickness started rearing its ugly head, and many more people would die from it within the next 5 years.

The total estimated death toll: In Hiroshima 100,000 were killed instantly, and between 100,000 and 200,000 died eventually. In Nagasaki about 40,000 were killed instantly, and between 70,000 and 150,000 died eventually.

The events of August 6 and August 9 can be translated into environmental effects more literally. The blasts caused air pollution from dust particles and radioactive debris flying around, and from the fires burning everywhere. Many plants and animals were killed in the blast, or died moments to months later from radioactive precipitation. Radioactive sand clogged wells used for drinking water winning, thereby causing a drinking water problem that could not easily be solved. Surface water sources were polluted, particularly by radioactive waste. Agricultural production was damaged; dead stalks of rice could be found up to seven miles from ground zero. In Hiroshima the impact of the bombing was noticeable within a 10 km radius around the city, and in Nagasaki within a 1 km radius.

**Iraq & Kuwait** – The Gulf War was fought between Iraq, Kuwait and a number of western countries in 1991. Kuwait had been part of Iraq in the past, but was liberated by British imperialism, as the Iraqi government described it. In August 1990, Iraqi forces claimed that the country was illegally extracting oil from Iraqi territory, and attacked. The United Nations attempted to liberate Kuwait. Starting January 1991, Operation Desert Storm began, with the purpose of destroying Iraqi air force and anti-aircraft facilities, and command and control facilities. The battle was fought in Iraq, Kuwait and the Saudi-Arabian border region. Both aerial and ground artillery was applied. Late January, Iraqi aircraft were flown to Iran, and Iraqi forces began to flee.

**Impact on Environment:** The Gulf War was one of the most environmentally devastating wars ever fought. Iraq dumped approximately one million tons of crude oil into the Persian Gulf, thereby causing the largest oil spill in history. Approximately 25,000 migratory birds were killed. The impact on marine life was not as severe as expected, because warm water sped up the natural breakdown of oil. Local prawn fisheries did experience problems after the war. Crude oil was also spilled into the desert, forming oil lakes covering 50 square kilometres. In due time the oil percolated into groundwater aquifers.

The oil spills did considerable damage to life in the Persian Gulf. Several months after the spill, the poisoned waters killed 20,000 seabirds and had caused severe damage to local marine flora and fauna. The fires in the oil wells caused immense amounts of soot and toxic fumes to enter the atmosphere. This had great effects on the health of the local population and biota for several years. The pollution also had a possible impact on local weather patterns.

Fleeing Iraqi troops **ignited Kuwaiti oil sources**, releasing half a ton of air pollutants into the atmosphere. Environmental problems caused by the oil fires include smog formation and acid rain. Toxic fumes originating from the burning oil wells compromised human health, and threatened wildlife. A soot layer was deposited on the desert, covering plants, and thereby preventing them from breathing. Seawater was applied to extinguish the oil fires, resulting in increased salinity in areas close to oil wells. It took about nine months to extinguish the fires.

During the war, many dams and sewage water treatment plants were targeted and destroyed. A lack of possibilities for water treatment resulting from the attacks caused sewage to flow directly into the Tigris and Euphrates rivers. Additionally, pollutants seeped from bombed chemical plants into the rivers. Drinking water extracted from the river was polluted, resulting in widespread

disease. For example, cases of typhoid fever have increased tenfold since 1991.

Movement of heavy machinery such as tanks through the desert damaged the brittle surface, causing soil erosion. Sand was uncovered that formed gradually moving sand dunes. These dunes may one day cause problems for Kuwait City. Tanks fired Depleted Uranium (DU) missiles, which can puncture heavy artillery structures. DU is a heavy metal that causes kidney damage and is suspected to be teratogenic and carcinogenic. Post-Gulf War reports state an increase in birth defects for children born to veterans. The impact of Depleted Uranium could not be thoroughly investigated after the Gulf War, because Saddam Hussein refused to cooperate. Its true properties were revealed after the Kosovo War in 2001 (description below). DU has now been identified as a neurotoxin, and birth defects and cancers are attributed to other chemical and nerve agents. However, it is stated that DU oxides deposited in the lungs of veterans have not been thoroughly researched yet. It was later found that this may cause kidney and lung infections for highly exposed persons.

After the Gulf War many veterans suffered from a condition now known as the Gulf War Syndrome. The causes of the illness are subject to widespread speculation. Examples of possible causes are exposure to DU (see above), chemical weapons (nerve gas and mustard gas), an anthrax vaccine given to 41% of US soldiers and 60-75% of UK soldiers, smoke from burning oil wells and parasites. Symptoms of the GWS included chronic fatigue, muscle problems, diarrhoea, migraine, memory loss, skin problems and shortness of breath. Many Gulf War veterans have died of illnesses such as brain cancer, now acknowledged as potentially connected to service during the war.

**Afghanistan war** – In October 2001, the United States attacked Afghanistan as a starting chapter of the 'War on terrorism', which still continues today. The ultimate goal was to replace the Taliban government, and to find apparent 9/11 mastermind and Al-Qaeda member Osama Bin Laden. Many European countries assisted the US in what was called 'Operation Enduring Freedom'.

Read more: <http://www.lenntech.com/environmental-effects-war.htm#ixzz1DSwIOnmc>

During the war, extensive damage was done to the environment, and many people suffered health effects from **weapons** applied to destroy enemy targets. It is estimated that ten thousand villages, and their surrounding environments were destroyed. Safe drinking water declined, because of a destruction of water infrastructure and resulting leaks, bacterial contamination and water theft. Rivers and groundwater were contaminated by poorly constructed landfills located near the sources.

Afghanistan once consisted of major forests watered by monsoons. During the war, Taliban members illegally trading timber in Pakistan destroyed much of the forest cover. US bombings and refugees in need of firewood destroyed much of what remained. Less than 2% of the country still contains a forest cover today.

**Impact on Environment:** Bombs threaten much of the country's wildlife. One of the world's important migratory thoroughfare leads through Afghanistan. The number of birds now flying this route has dropped by 85%. In the mountains many large animals such as leopards found refuge, but much of the habitat is applied as refuge for military forces now. Additionally, refugees capture leopards and other large animals and trade them for safe passage across the border.

Pollution from application of explosives entered air, soil and water. One example is cyclonite, a toxic substance that may cause cancer. Rocket propellants deposited perchlorates, which damage the thyroid gland. Numerous landmines left behind in Afghan soils still

cause the deaths of men, women and children today.

**Israel & Lebanon** – In July 2006, Hezbollah initiated a rocket attack on Israeli borders. A ground patrol killed and captured Israeli soldiers. This resulted in open war between Israel and Lebanon.

**Impact on Environment:** The war caused environmental problems as Israelis bombed a power station south of Beirut. Damaged storage tanks leaked an estimated 20,000 tons of oil into the Mediterranean Sea. The oil spill spread rapidly, covering over 90 km of the coastline, killing fish and affecting the habitat of the endangered green sea turtle. A sludge layer covers beaches across Lebanon, and the same problem may occur in Syria as the spill continues to spread. Part of the oil spill burned, causing widespread air pollution. Smog affects the health of people living in the city of Beirut. So far problems limiting the clean-up operation of oil spills have occurred, because of ongoing violence in the region.

Another major problem was forest fires in Northern Israel caused by Hezbollah bombings. A total of 9,000 acres of forest burned to the ground, and fires threaten tree reserves and bird sanctuaries.

**Russia & Chechnya** – In 1994 the First Chechen War of independence started, between Russian troops, Chechen guerrilla fighters and civilians. Chechnya has been a province of Russia for a very long time and now desires independence. The First War ended in 1996, but in 1999 Russia again attacked Chechnya for purposes of oil distribution.

**Impact on Environment:** The war between the country and its province continues today. It has devastating effects on the region of Chechnya. An estimated 30% of Chechen territory is contaminated, and 40% of the territory does not meet environmental standards for life. Major environmental problems include radioactive waste and radiation, oil leaks into the ground from bombarded plants and refineries, and pollution of soil and surface water. Russia has buried radioactive waste in Chechnya. Radiation at some sites is ten times its normal level. Radiation risks increase as Russia bombs the locations, particularly because after 1999 the severeness of weaponry increased. A major part of agricultural land is polluted to the extent that it can no longer meet food supplies. This was mainly caused by unprofessional mini-refineries of oil poachers in their backyards, not meeting official standards and causing over 50% of the product to be lost as waste. Groundwater pollution flows into the rivers Sunzha and Terek on a daily basis. On some locations the rivers are totally devoid of fish. Flora and fauna are destroyed by oil leaks and bombings.

**Vietnam war** – The Vietnam War started in 1945 and ended in 1975. It is now entitled a proxy war, fought during the Cold War between the United States and the Soviet Union to prevent the necessity for the nations to fight each other directly. North Vietnam fought side by side with the Soviet Union and China, and South Vietnam with the United States, New Zealand and South Korea. It must be noted that the United States only started to be actively involved in the battle after 1963. Between 1965 and 1968 North Vietnam was bombed under Operation Rolling Thunder, in order to force the enemy to negotiate. Bombs destroyed over two million acres of land. North Vietnam forces began to strike back, and the Soviet Union delivered anti-aircraft missiles to North Vietnam. The ground war of US troops against the Viet Cong began. The United States would not retreat from Vietnam until 1973, and during those years extremely environmentally damaging weapons and war tactics were applied.

**Impact on Environment:** A massive **herbicide programme** was carried out, in order to break the forest cover sheltering Viet Cong guerrillas, and deprive Vietnamese peasants of food. The spraying destroyed 14% of Vietnam's forests, diminished agricultural yield, and made seeds unfit for replanting. If agricultural yield was not damaged by herbicides, it was often lost because military on the

ground set fire to haystacks, and soaked land with aviation fuel and burned it. A total of 15,000 square kilometres of land were eventually destroyed. Livestock was often shot, to deprive peasants of their entire food supply. A total of 13,000 livestock were killed during the war.

The application of 72 million litres of chemical spray resulted in the death of many animals, and caused health effects with humans. One chemical that was applied between 1962 and 1971, called Agent Orange, was particularly harmful. Its main constituent is dioxin, which was present in soil, water and vegetation during and after the war. Dioxin is carcinogenic and teratogenic, and has resulted in spontaneous abortions, chloracne, skin and lung cancers, lower intelligence and emotional problems among children. Children fathered by men exposed to Agent Orange during the Vietnam War often have congenital abnormalities. An estimated half a million children were born with dioxin-related abnormalities. Agent Orange continues to threaten the health of the Vietnamese today.

Today, agriculture in Vietnam continues to suffer problems from six million unexploded bombs still present. Several organisations are attempting to remove these bombs. Landmines left in Vietnam are not removed, because the Vietnamese government refuses to accept responsibility.

**Pearl Harbor (WWII)** – When World War II began, Japan signed the Tripartite Pact with Nazi Germany and Fascist Italy. Consequentially, the United States closed the Panama Canal to Japanese shipping, and initiated a complete oil embargo. Japan, being dependent on US oil, responded to the embargo violently. On December 1941, Japanese troops carried out a surprise attack on Pearl Harbor, Hawaii, aimed at the US Navy stationed there. Despite the awareness that Japan might attack, the US was surprisingly unprepared for the Japanese aggression. There were no aircraft patrols, and anti-aircraft weapons were not manned.

**Impact on Environment:** For the attack five Japanese submarines were present in the harbor to launch torpedos. One was discovered immediately, and attacked by the USS Ward. All five submarines sank, and at least three of them have not been located since. As Japanese bombers arrived they began firing at US marine airbases across Hawaii, and subsequently battle ships in Pearl Harbor. Eighteen ships sank, including five battleships, and a total of more than 2,000 Americans were killed in action. The explosion of the **USS Arizona** caused half of the casualties. The ship was hit by a bomb, burned for two days in a row, and subsequently sank to the bottom. The cloud of black smoke over the boat was mainly caused by burning black powder from the magazine for aircraft catapults aboard the ship.

Leaking fuel from the Arizona and other ships caught fire, and caused more ships to catch fire. Of the 350 Japanese planes taking part in the attack, 29 were lost. Over sixty Japanese were killed in actions, most of them airmen.

Today, three battle ships are still at the bottom of the harbor. Four others were raised and reused. The USS Arizona, being the most heavily damaged ship during the attack, continues to leak oil from the hulk into the harbor. However, the wreck is maintained, because it now serves as part of a war memorial.

**World Trade Centre explosion** - The so-called 'War on Terrorism' the United States are fighting in Asia currently all started with the event we recall so well from the shocking images projected on news bulletins. On September 11, 2001, terrorists flew airplanes into the buildings of the World Trade Centre. It is now claimed that the attack and simultaneous collapse of the Twin Towers caused a serious and acute environmental disaster.

**Impact on Environment:** As the planes hit the Twin Towers more than 90,000 litres of jet fuel burned at temperatures above 1000

degree Celsius. An **atmospheric plume** formed, consisting of toxic materials such as metals, furans, asbestos, dioxins, PAH, PCB and hydrochloric acid. Most of the materials were fibres from the structure of the building. Asbestos levels ranged from 0.8-3.0% of the total mass. PAH comprised more than 0.1% of the total mass, and PCBs less than 0.001% of total mass. At the site now called Ground Zero, a large pile of smoking rubble burned intermittently for more than 3 months. Gaseous and particulate particles kept forming long after the towers had collapsed.

The day of the attacks dust particles of various sizes spread over lower Manhattan and Brooklyn, for many miles. Fire fighters and medics working at the WTC were exposed, but also men and women on the streets and in nearby buildings, and children in nearby schools. In vivo inhalation studies and epidemiological studies pointed out the impact of the dust cloud. Health effects from inhaling dust included bronchial hyper reactivity, because of the high alkalinity of dust particles. Other possible health effects include coughs, an increased risk of asthma and a two-fold increase in the number of small-for-gestational-age baby's among pregnant women present in or nearby the Twin Towers at the time of the attack. After September, airborne pollutant concentrations in nearby communities declined.

Many people present at the WTC at the time of the attacks are still checked regularly, because long-term effects may eventually show. It is thought there may be an increased risk of development of mesothelioma, consequential to exposure to asbestos. This is a disease where malignant cells develop in the protective cover of the body's organs. Airborne dioxins in the days and weeks after the attack may increase the risk of cancer and diabetes. Infants of women that were pregnant on September 11 and had been in the vicinity of the WTC at the time of the attack are also checked for growth or developmental problems.

**Non violence is the solution (mantra) to stop all these destruction of nature and humanity.** We have many examples to show the power of non-violence i.e., Martin Luther King Jr., Mahatma Gandhi and Nelson Mandela etc. There is inevitable relationship between peace and sustainable development. Non violence is not pacifism and it isn't just a simple methodology for marches or other actions. More importantly non-violence is not the resigned attitude of those who avoid conflict and graveness out of fear. Non violence is a great life philosophy and method for taking action. In 2006 peace ethnologist Judith Hand presented a strategy for abolishing war premised on using nonviolent resistance (*A Future Without War: the Strategy of a Warfare Transition.*)

**Victory through non violence (India):** India got its independence from British ruler through non-violence only. The Britishers have ruled the country for more than 100 years and became very powerful. It through the non-violence and satyagrah that Indian forced the Britishers to quit India on 15 August 1947. If it could have a violent movement, loss of human and environment was crystal-clear. But because of the philosophies of Mahatma Gandhi we have saved lots of life and resources.

#### **Power of Non violence (South Africa):**

A political system in South Africa from 1948 to the early 1990s that separated the different peoples living there and gave privileges to those of European origin being abolished because of non-violence. Committed to non-violence and an end to apartheid, Nelson Mandela became the president of South Africa after spending 18 years in prison on Robben Island, and 27 years in prison altogether. But, his rise to become one of the world's most prominent advocates of peace and racial harmony for all mankind was a rocky road, often laced with violent armed resistance once he saw that civil disobedience was getting him and his fellow Afrikaner nowhere.

#### **Conclusion**

The earth's environment is battered by war, its preparation, practice and aftermath. It is destroyed as an act of war; it is used as a weapon of war; and its destruction is expensive and sometimes irreversible. Its integral involvement with war is often secret, widely ignored, and easily forgotten – until now.

It's the natural tendency of governments to suppress or talk down bad news. So it's the duty of the rest of us – to uncover and publicize it wherever possible. Without the facts, there can't be informed public opinion, nor a corporate will to deal with the disasters that war creates – dangerous not only for combatants but for civilians, not only for the duration of the war but far into the future, not for warring countries alone but for the whole world.

In one way or another, everyone is already affected but we must stop all the violence. And the first thing to go must be Non violence.

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