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# War and the environment. A reflection on the impacts of war on East Timor

**Por:** Julião Pereira<sup>1</sup>;

racalde@ufg.edu.br

Nelson Roberto Antoniosi Filho<sup>2</sup>

&

Aldo Muro Júnior<sup>2</sup>

aldo.muro@ing.unipi.it

<sup>&</sup>lt;sup>1</sup> É Doutor em Química pela Universidade Federal de Goiás – UFG, é Mestre em Química pela Universidade Federal de Goiás – UFG e Graduado em Química pela Universidade Nacional de Timor-Leste. É autor de artigos científicos em periódicos na mídia internacional.

<sup>&</sup>lt;sup>2</sup> É Pós-doutor em Química pela Universidade de São Paulo – USP, é Doutor em Ciências: Química Analítica pela Universidade de São Paulo - USP e Graduado em Química pela Universidade de São Paulo - USP. É servidor público federal, docente do Ensino Superior, lotado na Universidade Federal de Goiás – UFG, na cidade de Goiânia. Atua nas seguintes Linhas de Pesquisa: Química do meio ambiente; Química analítica; Bioequivalência de medicamentos; Petroquímica e Química de alimentos. Atua nos seguintes Projetos de Pesquisa: Desenvolvimento de normas técnicas ABNT/ NBR para a determinação de estercides e produtos de oxidação em óleos e gorduras residuais (OGR) e em biodiesel; Prospeçção de microalgas extremófilas para a produção de biodiesel e coprodutos de alto valor agregado; Projeto biotimor: produção de biodiesel, aromas e purificadores de água para o desenvolvimento do Brasil e do Timor-Leste, Normas técnicas ABNT/NBR para determinação do teor de biodiesel em misturas BX utilizando cromatografia gasosa e análise por injeção de fluxo; Pesquisa, desenvolvimento e inovação em tecnologias para a produção e uso de biodiesel derivados de óleos microalgas; Ecotoxologia e análise de poluentes ambientais. Atua no seguinte Projeto de Extensão: Programa de monitoramento da qualidade de combustíveis em Goiás e Tocantins. Atua no seguinte Projeto de Desenvolvimento: Desenvolvimento de processos e produtos inovadores a base de vitaminas e antioxidantes derivados de rejeitos industriais e da agroecologia. É membro do Corpo Editorial do periódico "I dea". É revisor dos seguintes periódicos: "Revista Ciência e Engenharia"; "Fuel"; Acta Scientiorum -Tecnologia"; "Acta Scientiorum – Health Sciences"; "Chemosphere"; "Journal of Cereals and Oilseeds"; "African Journal of Biotechnology"; "Journal of Polymers and the environment"; "Renewable energy"; "Environment Science and pollution research international"; "Energy & Fuels"; "Journal of the Brazilian Chemical Society" e "Química nova".



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## **Abstract**

Whenever people think of war, they often reflect on the tragic loss of human life They seldom consider the loss and damage caused to nature. War, since the beginning of its history, has never been close to the happiness, tranquillity and security of humanity and even the spectrum of war that causes people to be traumatised. The activities that correlate the war that affected life and the environment are productions, testing an explosion of nuclear weapons. Land and naval bombers, landmines, and Depredation, defoliation and toxic pollution. An example, the war that took place in Southeast Asia after World War II in 1975 on the invasion of Indonesia on the island of Timor. Indonesian forces moved hundreds of thousands of people into concentration camps, where they were famine and disease Indonesian aircraft bombers spread chemical agents throughout the island, where they resulted in various diseases that affected animals and the population. Although many people die in lack of access to food. The land was burned along with animals intended for farming.

Keywords: Environment; war; Timor-Leste; constitutional environmental law.

# R esumo

Sempre que as pessoas pensam em guerra, das freqüentemente refletem sobre a trágica perda da vida humana. Eles raramente consideram as perdas e danos causados à natureza. A guerra, desde o começo de sua história, nunca esteve próxima da felicidade, tranquilidade e segurança da humanidade e até mesmo do espectro da guerra que leva as pessoas a serem traumatizadas. As atividades que correlacionam a guerra que afetou a vida e o meio ambiente são produções, testando uma explosão de armas nudeares. Bombardeiros terrestres e navais, minas terrestres e depredação, desfoliação e poluição tóxica. Um exemplo, a guerra que coorreu no Sudeste Asiático após a Segunda Guerra Mundial em 1975, na invasão da Indonésia na ilha de Timor. As forças indonésias deslocaram centenas de milhares de pessoas para campos de concentração, onde estavam famintos e doentes. Bombardeiros de aviões indonésios espalharam agentes químicos por toda a ilha, onde resultaram em várias doenças que afetavam animais e a população. Embora muitas pessoas morram em falta de acesso a comida. A terra foi que mada junto com animais destinados à agricultura.

Palavras-chave: Ambiente; Guerra; Timor-Leste; Direito ambiental constitucional.



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### R esumo

Kiam ajn homoj pensas pri milito, ili ofte pripensas la tragikan perdon de homa vivo. Ili malofte konsideras la perdojn kaj damaĝojn kaŭzitajn de la naturo. Milito, de la komenco de sia historio, neniam estis proksima al la feliĉo, trankvilo kaj sekureco de la homaro kaj eĉ al la spektro de milito, kiu kaŭzas traŭmatojn de homoj. La agadoj, kiuj korektas la militon, kiu influis la vivon kaj la medion, estas produktadoj, provantaj eksplodon de nukleaj armiloj. Landaj kaj ŝipaj bombistoj, landaj minoj kaj depredado, senhonorigo kaj venena poluado. Ekzemplo estas la milito okazinta en Sudorienta Azio post la Dua Mondmilito en 1975, en Indonezio de la invado de Timor. Indoneziaj fortoj delokigis centojn da miloj al koncentrejoj, kie ili malsatis kaj malsanis. Indoneziaj aviadilaj bombistoj disvastigis kemiajn agentojn tra la insulo, kio rezultigas diversajn malsanojn influantajn bestojn kaj la loĝantaron. K vankam multaj homoj mortas pro manko de aliro al manĝo. La tero forbruliĝis kune kun bestoj destinitaj al agrikulturo.

**Ŝlosilvortoj**: Medio; Milito; Timor-Leste, Konstitucia media juro.

# Introduction

Whenever people think of war, they often reflect on the tragic loss of human life. They seldom consider the loss and damage caused to nature. War, since the beginning of its history, has never been dose to the happiness, tranquillity and security of humanity and even the spectrum of war that causes people to become traumatised.

War has marked the human experience since the beginning of time.

The demands of war profoundly affect the environment! War is a nefarious activity for obvious reasons, and no satisfactory explanation justifies human beings, as a species, from practising it. Whenever there is an internal or international war or rebel uprising, the media covers them extensively. One aspect that is often not covered, in the short or long term, is the impact generated on the ecosystems involved in the warring regions.

The activity impacts the environment.



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In experimental processes, manufacturing, maintenance and use of conventional weapons, chemical, biological or nuclear weapons in the war, caused unimaginable radioactive poisoning and propagation. Waste from these activities has contributed to environmental degradation and pollution.

Concerning the whole activity of the war, uranium was used, which is a radioactive element, in all explosives and weapons of war.

After the use of depleted uranium during the Gulf War (1991), War in the Balkans (Bosnia – 1994, Kosovo and Serbia – 1999), Much failure and misleading opinions or calamitous predictions emerged.

During the Gulf War, about 300 tonnes of depleted uranium were abandoned during the overflights of aircraft and combat cars fire Shells in Kuwait and southern Iraq, in an area of 20,000 km2. In particular, depleted uranium contributed to the "Gulf War syndrome", where about 100,000 U.S. soldiers and the UN Task Force, were met and diagnosed with leukaemia correlated with exposure to depleted uranium (MCCLAIN et all, 2001, p. 115)

The war-related activities that have affected life and the environment are production, testing and explosion of nuclear weapons. Ground bombers, using aircraft and ships, landmines, defoliation by toxic agents, propagated by aerial sprinkling, depredation by several poisonous agents, correctly said, radioactive or cardinogenic.



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# Nuclear weapons production, testing and explosion

Nuclear weapons technology was developed during World War II and expanded as an industrial enterprise of vast range and complexity in

Cold War between the United States and the Soviet Union.

Nuclear weapons They continue to dominate the concerns about the potential dangers of radioactivity to the environment. The radiation that is launched in the environment, in many phases of production and analysis processes, poses a severe threat to the health of biota, including human beings.

Nudear explosions produce destructive immediate and late effects.

The immediate effects (explosion, thermal radiation, the reaction of ionising radiation) are produced and cause significant destruction within seconds or minutes of a nuclear detonation.

In the attack on Hiroshima, accidents including fatalities were found: the burns (including those caused by the storm of fire that followed) were the most severe detriments. Two-thirds of the people who died in the first stage of the nuclear explosion suffered burns on a larger scale.

According to Bethe (1991). The explosion and burn injuries were found in 60 to 70% of all the survivors examined. People dose enough to suffer the disease from the radiation were within the radius of the lethal effects of the explosion and burns flash.

As a result, only 30% of the injured survivors presented radiation-induced diseases. Of those who escaped the explosion or burning and who were treated for their burns, were victims of diseases caused by the radiation (GIANNOU, 1997, p. 1453).



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The effect of the long-term nuclear explosion caused radioactive fallout and other possible environmental effects, inflicted damage over an extended period and which may last for centuries, and may, furthermore, cause adverse effects on local Far away from the detonation site.

Radioactive products are much more dangerous when depositing in the soil, a phenomenon known as fallout.

The rate of influence in which the liquid precipitation influences human health depends very much on the altitude at which the explosion occurs. There is less influence when the explosion occurs at lower altitudes, causing deleterious effects on the human cronyism, when at higher altitudes, damaging, however, in a more severe way the environment.

Although not as deadly as direct precipitation, other environmental factors can be very damaging by radiation. The high temperature of the nuclear fireball, followed by rapid expansion and cooling caused damage to the ozone layer, seeing that large amounts of nitrogen oxide, is formed from the reaction of oxygen to nitrogen, present in the atmosphere, being that This reaction is very similar to what happens in internal combustion engines, with widely studied, known and disseminated consequences.

# The bombing by air craft and ships

The bombing of urban infrastructure, which constitutes the artificial environment of a significant fraction of the world's human population, always causes a forced departure from the survivors, to places that have not been destroyed and where they can shelter, Turning it into a society of refugees.



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During World War II, when the quality of the era was significantly affected by the military technology of the time, the practice of bombing civil settlements became increasingly prevalent, and hundreds of thousands of people died as a result.

In the air bombing of Tokyo in March 1945, it is estimated that there were 100,000 to 200,000 deaths. During the attack 70 German cities, including Hamburg, in 1943; And in Dresden, in 1945, casualties were counted between 500,000 and 800,000 people. About 200,000 people died due to the acute effects of the atomic bombs on Hiroshima and Nagasaki in 1945 (Bed, 1986).

The bombing of cities and the destruction of forests, farms, transport systems and irrigation networks during World War II has produced devastating environmental consequences. Moreover, by the end of the war, there were almost 50 million refugees and displaced persons (PROUDFOOT, 1956).

In the last year of the war in World War II, the coastal lands and the northern part of France were torn apart by bombing. In Holland, south of the Zuyder Sea, there was flooding, with the destruction of dykes and many ports were obstructed with unexploded munitions and sunker ships. The high damage had been done for most cities in Europe, with the most affected, including Warsaw, Berlin, Hamburg, Dresden, Düsseldorf, Bologna, Le Havre, Rouen, Brest, Pisa, Verona, Lyons, Budapest, Leningrad, Kiev and Krakow.



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# Landmines

As a result of the last 50 years of wars in Europe, Africa, Asia and Latin America, estimates: 70 The 100 million of antipersonnel landmines are still active, and At the world level, another hundred million are always stocked (Bethe, H., 1991).

Nearly 400 million was spread across all continents since World War II; And with the proliferation of civil wars, waged by irregular forces, the use and dissemination of landmines as a preferred method of protection and Earth accelerated.

Currently, Landmines are without taking into account the requirements of international law to mark, map, monitor and remove them. Delsarte, most of the victims of mine explosions are divilians involved in farming or foraging activities. Reliable regional estimates of the incidence of injury and death rates are difficult to find. A statistical reference often cited adds that landmines kill or injure about 500 people a week (DHA, 1996).

The Kosovo field was the most affected by the antipersonnel landmines, practically being armed with mines, adequately placed on all sides. One year after international efforts to remove them, it is estimated that 1,415 suspected minefields remain active. Since June 1999, there has been a cease-fire and, consequently, return of the divilian population to urban centres and rural areas. The monthly number of casualties and injuries, by landmines or by explosions of duster bombs, decreased from the return of the population to their originating site. Data indicate that the number of deaths by mines in the year 2,000 reached the optimal level of no occurrence, and only one year before, quantified 44 incidences. The injuried cases, in turn, went from 109 severe accidents to 15, from 1999 to 2000 (I CG, 2000).



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Landmines damage the environment through one of the four mechanisms fear of mines denies access to abundant natural resources and arable land; Populations are forced to move, preferably in marginal and fragile environments, to avoid mined fields which accelerates migration and depletion of biological diversity; And Explosions of landmines disrupt the essential processes of soil and water.

The revision of the experiences of the twentieth century indicates that the persistence of active mines and unexploded munitions haunt the old areas of battle and that, despite the intensive localisation and deactivation efforts, millions of hectares remain under Ban in Europe, North Africa and Asia. In Libya, a third of its land mass is considered to be contaminated by mines and by munitions on a possible stage of the explosion, originating from the Second World War. (SGALER, 1985).

When these mines explode, besides causing severe injury and death to humans, domestic animals and wildlife, they break down the systems of the soil, destroy the life of plants and disrupt the flow of water, accelerating the disruption of the ecosystem Hit.

The interactions between natural disasters and buried landmines, still active and inertia in achieving their disarmament, increasing concern for mined areas, with the protection of the population and the environment.

As an example of this interaction between mines and natural disasters, the case of floods in Mozambique may arise during the years 1999 and 2000, which has shifted hundreds of thousands of landmines, left by the civil war, and the concern with the whereabouts Of them delayed the recovery operations of flood-affected areas.



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The effort inflicted to mark the known minefields resulted in a considerable delay in the recovery of areas affected by flood waters, only possible, by providing a mapping team sent by the community International (ICBL, 1999).

# Depredation, defoliation and toxic pollution

Attempts to harm the environment as tactics of war against the formal enemy and as a means to instill terror in the general population have been described throughout history.

During the Second World War, there are reports of cases of rupture of dykes and the destruction of a land dam by burnings, have been well documented (WESTING, 1977).

It is common sense that extensive use of environmental destruction as a strategic war practice can be seen until the time of the use of defoliants in the Southeast Asian war, for example, the use of dioxin-based pesticides and Dibenzofurans (Orange effect), which until today cause genetic mutations in Vietnamese children (third generation).

From 1965 to 1971, the United States sprayed 3,640 km2 From South Vietnam's arable land with herbicides, using an estimated total amount of 55 million, 50 pounds of herbicides.

The justification for the use of pesticides in the war was to sublimate the enemy, removing it from their natural trenches in areas of dense for ests, their power supplies and means of coverage (WESTING, 1980)

This widespread use of chemicals to destroy agricultural fields, for ests and water springs has no historical precedents, and the environmental consequences are still relatively unexplored in the scientific literature.



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Many wars fought since Vietnam, such as the Persian Gulf War, which occurred in January and February 1991, demonstrate how war technologies and the warfare industry can be Used To create widespread environmental chaos.

The release of about 10 million barrels of oil from Kuwait, by Iraq, in the waters of the Persian Gulf, oil spills in the war between Iraq and Iran caused high contamination to an ecosystem that has been suffering abuse for decades (UNEP, 1991).

Oil deposits in the Gulf have fed the region's economy for half a century. However, other non-living resources (for example, for desalination of seawater) and living resources, such as coastal ecosystems, fish, birds, and other species groups, are taking on growing importance in the realisation of Development Goals. The environment of golf and resources is influenced by natural processes and the pressures arising from a range of human activities.

Recent wars, or that the terms of humanitarian aid of the "complex humanitarian emergencies" have been assessed as to their potential, by creating refugee camps, to inflict damage on the local environment where the fields are situated.

In the case of refugee camps in the region of Great Lakes African 1994-1997, Mozambique, Sudan, in the border region between Afghanistan and Pakistan, and in East Timor, during the years 2006 to 2009, as a result of the political crisis that caused the civil war, the refugee camps were created in many places in own capital Dili and other districts of East Timor.



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The creation of these refugee camps affected the environment in matters of deforestation, invasion of vulnerable ecosystems and national parks, water pollution and degradation of basic sanitation, air pollution and the loss of endangered species.

East Timor: UM of the world's youngest countries and their suffering during the struggle for their independence Geography and a brief history of East Timor I sland

East Timor is a small country that is in the eastern half of the island of Timor, located in the far reaches of Southeast Asia, which is between the South China Sea and the Indian Ocean. The island area occupies 30,000 square kilometres (Waldman, 2003), Which is shaped like a crocodile, according to the interpretation of the local imagery.

Dili is the capital of the country that lies at 08 ° 35, 125 ° 35' and Baucau is the second largest city in the country. The total population in 1999 was 859,900 inhabitants, and population growth rose to 1,084,971, according to the last census in 2007.

Natural Resources of the country, they are the object of envy to the neighbouring countries. Mother Nature blessed him with a variety of Natural Resources. Some of these Natural Resources Indude gold, petroleum, natural gas, manganese and marble.

These valuable Resources They are found scattered all over the country. The Government of East Timor is acutely aware of how to use this much stock of Natural Resources.

In the area of agriculture, coffee is one of the main income crops that obtain revenue for the country through the external market. East Timor is the smallest coffee producing country in



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the world, but the Arabian variety is one of the best types of coffee that attracts buyers from all over the world to East Timor.

In addition to the cafe, East Timor has other natural products, intended for export: coconut, sandalwood and marble.

Glimpsing The history of the people of East Timor for their struggle of independence, the population went through the suffering of war, which lasted long 24 years with Indonesia after.

Previously, the island was a colony of Portugal.

O Empire Portuguese Colonized the island of East Timor, in the early 16th century, to seek the exploitation of sandalwood-a kind of noble wood, used in the manufacture of furniture and perfumery.

Geopolitical disputes between Portugal and Holland led to the demise of the western part of the island after the condusion of an international treaty in 1859.

However, the island has not suffered invasion and exploitation of only those three countries. Even Imperial Japan occupied East Timor during the Second World War period, specifically between 1942 and 1945.

On 28 November 1975, after a brief civil war between the political parties of East Timor in the short term, the independence of the Democratic Republic of East Timor was proclaimed, however, only nine days after its so dreamed and fleeting independence, Indonesia invaded the novel Nation, keeping it under occupation for the next 24 years.

The secret documents published by the National Security and Archive of George Washington University, prove that the United States Government has waved favourably to the



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Indonesian invasion of East Timor in the year 1975, culminating in the death of about 200,000 Timorese, during a quarter of a century that followed (BURR, 2001).

Indonesia launched its invasion hours after the president of the United States Gerard Ford and the premiere Henry Kissinger came out of an official meeting with the President of Indonesia, Soeharto, the dictator in Jakarta – Indonesia.

The United States of America doubled the military aid to Indonesia in transfers of new weapons and especially helicopters inactivity of the East Timor invasion, which also served to sprinkle the orange effect, mutilating future generations of Timorese and injuring death their environment.

Soon after, in 1976, Indonesia took over Timor as its twenty-seventh province, called the Indonesian language, East Timor, on the grounds of That part of the Timorese population supported integration with Indonesia.

Indonesian forces moved by hundreds of thousands of people in concentration camps, are left subject to famine and disease.

The Indonesian air bombers, they spread chemical agents throughout the island, where they culminated several diseases that affected animals and the population, that killed more people than the famine generated by the lack of access to food, caused by the burning Of the land and animals destined for livestock, by the Indonesians.

Concomitantly, the Indonesian armed forces carried out a vast movement of murders, torture, kidnappings (which caused people to disappear, leaving no trace for their families only), political arrests, and other abuses of Human rights Against the Timorese population.



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The abuses were notorious That the Indonesian armed forces were doing on women. In addition to suffering arbitrary detention, torture and summary execution, they faced rape and all kinds of sexual abuse.

Other forms of violence against women have taken the form of harassment, Forced sterilisation, Intimidation and compulsory marriage. Of these and other humanitarian setbacks occurring on the island, it can be said that, in psychological terms, there was a regular contributor to a shamefelt in the population with such abuses.

#### Life in East Timor after the war

The colonisation and the war that affected life and the environment in East Timor has left a brutal experience in the history of Timor exe human life.

With the departure of Indonesia from the territory of East Timor in 1999, the Timor ese land bequeathed the damage of the entire infrastructure of the Indonesian government that occupied the island for more than two decades.

Schools and hospitals that were built by the Indonesian Government itself, during the time of integration, were destroyed before leaving, by the oppressive forces themselves, in Shriekmaw genocide.

At the same opportunity, houses were destroyed and furthered the riches of the Timorese population, by the armed forces of Indonesia along with the militia groups (Timorese, who supported the occupation of Indonesia and were prepared by their military).



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Several families were separated. Hundreds of people took refuge in Australia, Portugal and Indonesia, fearful that the same fact occurred in 1975 when independence only took a few days. They took shelter or were taken compulsorily by the military withdrawing.

Currently, the Timorese population lives in tranquillity concerning safety after release. Even so, the Timorese still face several daily problems arising from the Indonesian occupation.

In the social area, there is a tremendous unemployment rate, and half of the Timorese population is unemployed.

Health still suffers from the effects of wars because there are different types of diseases and the infant mortality rate is enormous.

The natural environment was extremely mistreated, presenting vast areas of deforestation. The rural population Depreda the fauna by slaughtering trees for the exploitation and marketing of Madeira.

Much of the forests have already been consumed as a result of this predatory culling, faced with the need for the population to subsist.

The topic of the environmental problem on the island is basic sanitation. Only 5% of the population has treated water supply.

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