

Forum: Special Conference on Environment

Issue: Preventing the damages of armed conflicts on the environment emphasizing the preservation of natural sites and habitats in conflict regions

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Introduction

The devastating impacts of armed conflicts directly interrupt human life, causing political instability, forced displacement, and economic downturn. However, such conflicts also have severe damage to the environment, which is highly overlooked. Damage to forests, water sources, and biodiversity further reduces resilience to the climate crisis the world is already facing. In conflict regions, natural habitats are turned into war fields, exposing vulnerable ecosystems to artillery and, in extreme cases, illegal resource exploitation.

Damage to ecological infrastructure leads to tons of contaminated debris, toxic waste, and access to clean water that the environment needs. Waste management also collapses and further challenges sustainability efforts.

Additionally, Factories and oil fields are often situated in natural habitats, and bombing such fields causes the exposure of toxic smoke to the environment, leading to polluted air, water, and soil.

Definition of Key Terms

Environmental Recovery: A method used for restoring ecosystems, natural habitats, and environmental infrastructure, ensuring sustainability.



Natural Sites: Geographical areas that contain a significant amount of ecological or geological value and are protected by international law.

Armed Conflict: Occurrence of an event where organized groups, militaries engage in a battle that results in significant violence and destruction.

World Heritage Site: A landmark or area recognized by UNESCO that qualifies to be protected due to its cultural, historical, scientific, or natural significance. Furthermore, they are protected via international agreements.

Ecosystem: A system made up of living organisms and the surrounding nonliving organisms, which all interact and influence one another within a shared environment

Illegal Mining: A mining activity that is done without proper state control or permission

Background Information

Historical overview of environmental damage in conflicts

Throughout history, armed conflicts have posed great damage to the environment. Although wars' consequences are aligned with human suffering, their environmental damages are equally devastating. Damages to the environment can cause long-term challenges to biodiversity and climate resilience, and natural resources.

One major example of an armed conflict that affected the environment is the Vietnam War. In 1955, the war started with both sides, Vietnam and the U.S, using full military power to claim victory. However, American technology was way more ahead than the Vietnamese forces, and they started to use toxic weapons, making the



battlefield a polluted area for the environment. The usage of Agent Orange, a highly toxic chemical weapon, which was used for defoliating forests, led to severe damage to millions of hectares and forests. This chemical weapon deforested large swaths of Vietnam, contaminated water and soil.

In more recent times, the 1991 Gulf War showed warfare's impact on land and sea environments was devastating. As Iraqi forces retreated, they set over 600 oil wells ablaze and released millions of gallons of pure oil into the Persian Gulf, resulting in air pollution. It generated a toxic rain called the "black rain" which poisoned crops plus livestock. Marine life suffered damage during a very serious oil spill, and environmental recovery plans were implemented, and it took a lengthy time to recover. To this day, some areas have still not recovered completely.

Another powerful example is the Kosovo War, which occurred between 1998–1999. During the war, NATO airstrikes hit industrial sites, causing the release of hazardous chemicals into the Danube River and the soil which was surrounding the area. The chemicals didn't just disrupt ecosystems, they seeped into the daily lives of the people who depended on the river for drinking water, farming, and fishing. Local communities in the region faced long-term health risks, and the land they had relied on for generations became contaminated and unsafe. Even after the fighting ended, the environmental consequences remained, making recovery for both people and nature far more difficult.

In Africa, ongoing conflicts in the Democratic Republic of the Congo have placed enormous danger on protected areas like Virunga National Park, which is one of the most biodiverse places on Earth. Armed groups that are present in the region have turned to illegal mining, stripping the land of its natural resources and putting endangered species in jeopardy, bringing them closer to extinction. For the rangers and local communities trying to protect the park, the presence of armed actors has made conservation incredibly dangerous, and in many cases, nearly impossible.



What should be a wildlife region became a battlefield, leaving behind broken ecosystems and a deep sense of loss among those who call the region home.

Similarly, the Syrian Civil War shows how modern conflicts can leave deep and lasting scars on the environment. Across the country, the bombing of industrial areas, oil refineries, and water treatment plants has filled the air with toxic fumes and polluted the soil and water that communities depend on to survive. With fuel supplies cut off and basic infrastructure destroyed, many families have been forced to cut down trees just to get their nutrition properly for consumption. As a result, forests have disappeared, and the land continues to suffer, long after the explosions have stopped. In Syria, the fight for survival has come at a devastating cost to both people and nature.

Natural habitats and sites that were affected by armed conflicts

Virunga National Park

Found in the eastern region of the DRC, Virunga National Park is home to one of the most endangered species, including mountain gorillas. It is also known to be one of the most diverse regions in the world. The poaching and illegal mining, as well as the deforestation taking place within the park due to armed conflict with militia groups, are dangerous to the natural resources in the region. The presence of enormous amounts of violence in the region makes it nearly impossible for the rangers to protect the wildlife.

Amazon Rainforest

In Colombia and many countries in South America, decades of guerrilla warfare and narco-trafficking have turned portions of the Amazonian rainforest into zones of ecological devastation. Extensive tracts of forest have been cut down by cartels for



coca cultivation, illicit mining, and trafficking routes, causing irreparable harm to one of the planet's most vital carbon sources. Indigenous people, typically stewards of the planet, have been displaced or terrorized, leaving the rainforest open to uncontrolled destruction.

Cedar Forests

Lebanon's national emblem cedar forests, filled with biodiversity and national identity, suffered immensely due to the Lebanese Civil War and other subsequent military conflicts. The anciently old trees became caught in crossfire as a result of shelling and deforestation as a result of fuel scarcity. Forest management regimes weakened as a result of war, and most of these precious ecosystems were devastated or degraded, which took decades to begin recovering.

Mesopotamia Marshes

The Mesopotamian Marshes of southern Iraq, once called the "Garden of Eden," were almost wiped out following the Iran-Iraq War. Saddam Hussein's government regarded the draining of the marshes as punishment for Marsh Arab societies. This led to an ecological meltdown with native fish populations dying, birds disappearing, and farm and seafood-based economies being lost.

Donbas Region

Since 2014, Donbas in eastern Ukraine has been the center of intense fighting. Military shells have destroyed industrial factories, coal mines, and chemical plants, poisoning rivers and woods with toxic material. In addition, shelling and military maneuvers have caused wildfires and land degradation, affecting agricultural production as well as natural ecosystems in an area previously characterized by high biodiversity and fertile land.



Sudd Wetlands

The Sudd Wetlands, among Africa's biggest freshwater wetland environments, have been devastated by South Sudan's decades of civil conflict. Oil exploration, militia activity, and infrastructure destruction have threatened the balance of this ecosystem. The disorder has endangered species, besides affecting migratory bird routes and the way of life of pastoralists.

Bamiyan Valley

The Bamiyan Valley in Afghanistan, once famous for its giant Buddha statues and natural landscapes, has been severely affected by war and environmental neglect. Deforestation is due to de facto instability and Taliban insurgency because locals burn wood for energy due to the lack of fuel infrastructure. Loss of cultural sites also brought into focus the overlap of environmental and heritage destruction during war.

Danube River Basin

In the 1999 Kosovo War, Serbian industrial plants along the Danube River were attacked with NATO bombing, causing chemical leaks and blazes. Hazardous contaminants dripped into the river, poisoning aquatic life and spreading downstream to neighboring countries. The spill not only suspended regional biodiversity but also produced long-term health risks for the people who relied on the Danube as a source of fishery, agriculture, and drinking water.

Tigray Highlands

The war in northern Ethiopia, the Tigray War, has caused widespread environmental degradation in the highlands. Land was cleared and ruined, forests were cut for firewood, and water bodies were polluted due to conflict. Agricultural systems have



been lost, and rural displacement has also pushed the environment past its limits to absorb climate stress.

Persian Gulf

In the 1991 Gulf War, retreating Iraqi soldiers torched over 600 Kuwaiti oil wells and intentionally flooded the Persian Gulf with crude oil. The environmental sabotage resulted in one of history's largest oil spills, suffocating marine life and contaminating coastlines. The flames also emitted poisonous clouds that poisoned the air and filled the air with black smoke for months, both impacting the environment and human health across the region.

Post Conflict Environmental Assessments (PCEAs)

One of the most significant actions the international community has taken to address the environmental consequences of conflict is the United Nations Environment Programme's (UNEP) Post-Conflict Environmental Assessments (PCEAs). Since the early 2000s, post-war environmental assessments have been carried out by UNEP in countries transitioning out of conflict, including Iraq, Sudan, Afghanistan, Lebanon, Ukraine, and the Balkans. These assessments aim to provide a scientific account of the effect conflict has had on the environment, natural resources, and public health, offering a foundation upon which governments and development partners can formulate environmentally sensitive recovery strategies. PCEAs take into consideration the devastation caused to infrastructure facilities, water sources, soil conditions, biodiversity, and waste management areas, typically not considered in standard post-conflict reconstruction strategies. For example, following the Lebanon war of 2006, UNEP assessed the oil spill from the Jiyeh power station that had contaminated over 150 km of coastline. In Sudan, UNEP accounts for environmental



degradation linked with tensions based on resources that shape elements of peacebuilding policy. What makes PCEAs particularly effective is that they focus on the long-term environmental sustainability of the recovery process to ensure that rebuilding does not damage the environment further or exacerbate any pre-existing ecological vulnerabilities. They also help governments prioritize remediation efforts, mobilize foreign assistance, and raise awareness of the underreported environmental dimension of conflict. Although they have been effective, PCEAs are not without their problems, including scarce funds, limited reach of conflict zones, and the absence of political will of governments. But they are an important and realistic tool in the global effort to mainstream environmental protection in post-conflict peacebuilding and recovery.

UNESCO World Heritage Protection in Conflict Zones Convention

UNESCO plays a critical role in protecting World Heritage Sites, both natural and cultural, threatened by violent conflict. By its World Heritage in Danger list and emergency action plans, UNESCO supports international cooperation for monitoring, assessing, and responding to war-induced damage. One of the most significant is Virunga National Park in the Democratic Republic of Congo, the first African World Heritage site that has been under attack by armed militias, poaching, and natural resource exploitation. In Mali, the 2012 armed conflict destroyed ancient tombs and manuscripts at Timbuktu, for which UNESCO established emergency documentation and reconstruction interventions alongside local communities. In Syria, war has severely ravaged Palmyra, an archaeological and cultural heritage site, and surrounding natural reserves, which have drawn UNESCO missions to assess lost heritage and implement post-conflict recovery strategies. Similarly, in Yemen, sites like the Historic Town of Zabid have been levelled under airstrikes,



which have led UNESCO to launch an international appeal for protection and support. Whereas UNESCO's potential is frequently hampered by limited funding and access, its efforts ensure the value of protecting environmental and cultural heritage in conflict, both as a moral imperative and as a necessary component of sustained peacebuilding and identity conservation.

Major Countries and Organizations Involved

United Nations Environment Programme (UNEP)

UNEP is the leading UN body addressing the environmental consequences of conflict. It has estimated damage in countries like Iraq, Sudan, Ukraine, and Lebanon through its Post-Conflict Environmental Assessments, offering concrete suggestions for green recovery. UNEP serves as the interface between environmental science and policy, ensuring that environmental concerns are integrated into post-conflict reconstruction and peacebuilding processes.

Iraq

Since a country gravely affected by war-related environmental damage, Iraq is today at the forefront of post-conflict ecological reconstruction. Oil well fires during the Gulf War and pollution caused by ISIS occupation led to extreme levels of air, soil, and water contamination. Iraq has collaborated with UNEP and foreign donors in mapping environmental impacts and rehabilitating vital ecological infrastructure.



Democratic Republic of Congo

The DRC is home to one of the most threatened habitats on the globe, including Virunga National Park, which has been overrun by illegal mining, poaching, and militia activities. Its decades-long civil war made conservation extremely challenging, highlighting biodiversity and community-based environmental management. International agencies like UNESCO and the WWF work together with the DRC to protect its heritage and facilitate ecological peacebuilding.

Ukraine

Since the beginning of the war in 2014, and especially since the escalation in 2022, Ukraine has witnessed massive environmental deterioration in the shape of deforested areas, industrialized polluted zones, and nuclear hazards. The government has cooperated with UNEP, the European Union, and other international organizations to document and tackle these consequences. Ukraine's experience highlights the importance of enhancing the impact of protecting the environment in active conflict regions.

United States of America

The United States plays a special and intricate part in the arena of environmental protection during armed conflict. As a dominant worldwide military force, certain overseas intervention efforts on its part, particularly in Iraq and Afghanistan, have resulted in environmental degradation in the form of destruction of infrastructure, pollution of the environment, and disruption of ecosystems. At the same time, the



United States is one of the biggest supporters of international institutions such as UNEP and UNESCO and actively contributes to post-conflict reconstruction and environmental resilience efforts in the world. The U.S. Department of Defense has also adopted internal policies to minimize the effects of military actions on the environment through the Environmental Security Program.

United Nations Educational Scientific and Cultural Organization (UNESCO)

UNESCO aims to protect both natural and cultural heritage in conflict zones through its World Heritage in Danger list and emergency intervention. It has responded to conflicts in the Democratic Republic of the Congo (Virunga National Park), Syria (Palmyra), and Mali (Timbuktu) with technical and financial assistance to save irreplaceable sites. UNESCO's work highlights that heritage preservation is not only a cultural necessity but a foundation of environmental integrity and national identity.

Timeline of Events

1 November 1995	The Vietnam War began following the use of Orange Agent by the United States of America
2 August 1990	The Gulf War began following the event of Iraqi forces retreating from Kuwait, setting over 600 oil wells on fire. Millions of gallons of oil are dumped into the Persian Gulf, leading to catastrophic air and marine pollution.



1998	NATO airstrikes target industrial sites in Serbia during the Kosovo War. Toxic chemicals leak into the Danube River, contaminating soil and water resources.
2000s	Launch of UNEP's Post-Conflict Environmental Assessments (PCEAs)
2006	Israeli Israeli-Lebanese War began
2012	Armed groups destroy cultural heritage in Timbuktu, Mali.
2014	Conflict in Donbas, Ukraine, starts to affect the environment
2011-present	The Syrian Civil War begins

Relevant UN Resolutions and Other Documents

- UN General Assembly Resolution contained in document A/RES/47/37
Adopted on 25 November 1992. The main aim of this resolution was to respect international law and humanitarian obligations related to environmental protection during conflict



- UN General Assembly Treaty named: Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques. Entered into force on 5 October 1978. The main aim of this treaty was to prohibit the use of environmental modification techniques during conflict.

Previous Attempts to Solve the Issue

The international community has made numerous attempts at grappling with the war's environmental consequences, though progress has been halting due to political, practical, and legal limitations. The United Nations Environment Programme (UNEP) has led the charge through its Post-Conflict Environmental Assessments (PCEAs), providing scientific analysis and policy guidance in Iraq, Sudan, Lebanon, and Ukraine. These assessments have informed national recovery strategies and highlighted the need for sustainable rebuilding methods. At the same time, UNESCO has worked in war-torn countries to protect World Heritage Sites through emergency action plans and worldwide campaigns, e.g., Virunga National Park (DRC), Timbuktu (Mali), and Palmyra (Syria). In the law, agreements like the ENMOD Convention (1978) and Additional Protocol I to the Geneva Conventions (1977) have imposed important, but limited, environmental protections during war. More recently, the 2022 Draft Principles on the Protection of the Environment in Armed Conflicts (PERAC) of the International Law Commission offers an inclusive contemporary legal framework that embraces pre-conflict, conflict, and post-conflict environmental concerns. Despite such efforts, enforcement remains an issue, and most of the conflict region continues to suffer from ecological devastation with little accountability and global coordination. Such efforts, although inaugural, underscore the need for stronger mechanisms, more cooperation, and more sustained mainstreaming of environmental protection in peace and security efforts.



Possible Solutions

Environmental Monitoring Mechanisms in Conflict Situations

installation of UN-monitored environmental monitoring centers in high-risk war zones. These centers would capture real-time damage risk in the environment, support early-warning systems for ecological threats, and impose responsibility on parties violating environmental protections in war.

Bundling Environmental Provisions within Peace Agreements

Impose post-conflict treaties and ceasefire agreements to include mandatory provisions for environmental rehabilitation, conservation of biodiversity, and the return of jurisdiction over protected locations to neutral agencies such as UNEP or UNESCO. These provisions might also require belligerents not to attack ecological infrastructure such as forests, rivers, or wildlife sanctuaries.

Environmental Training for Military Personnel

Resolutions can urge the promotion of mandatory environmental sensitivity training for peacekeeping forces and national forces operating in environmentally sensitive regions. UNEP or ICRC can offer this and stress minimizing ecosystem disruption, and following protected areas.

Emergency Environmental Response Task Force

The creation of an environmental rapid-response task force in UNEP or UNDRR, which can be deployed after conflict to assess environmental damage, clean up secondary disasters, and coordinate global relief for environmental rehabilitation.



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