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**PROTECTION OF ENVIRONMENT IN RELATION TO ARMED
CONFLICTS**- Shruti Sethia¹**ABSTRACT**

The protection of the environment during international armed conflicts has gained attention in recent years. The impact of armed conflicts on the environment can be devastating, with long-lasting effects on both the natural and human environment. The 1977 Geneva Conventions and Additional Protocol I recognize the importance of protecting the environment during armed conflicts. The laws of war and customary international law provide guidance on the protection of the environment, including the prohibition of environmental destruction, the requirement to mitigate environmental harm, and the obligation to restore the environment.

The protection of the environment during armed conflicts is a complex issue that requires the cooperation of multiple actors, including states, international organizations, non-governmental organizations, and local communities. Effective environmental protection during armed conflicts requires early identification of potential environmental risks, the inclusion of environmental considerations in military planning, and the implementation of appropriate mitigation measures. Furthermore, the involvement of local communities in the decision-making process can help ensure that environmental protection measures are culturally sensitive and effective.

The link between environmental degradation and armed conflicts highlights the importance of protecting the environment as a means of preventing and resolving conflicts. Environmental degradation can contribute to resource scarcity and social instability, which can in turn lead to

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armed conflicts. Conversely, environmental protection can promote sustainable development, reduce resource scarcity, and contribute to conflict prevention.

This research paper basically talks about the impact on environment in relation to armed conflicts and discuss about international laws and conventions protecting the environment in armed conflicts and Challenges and gaps in implementing environmental protection during armed conflicts also importance of cooperation and coordination among states, international organizations and civil society to protect the environment during armed conflicts

Keywords: Protection of Environment, Armed Conflicts, Resources, Environmental Degradation, development.

INTRODUCTION

Armed conflicts can have severe and lasting impacts on the environment, which can, in turn, affect human health and well-being. The protection of the environment during armed conflicts has become an increasingly important issue in recent years, as the consequences of environmental damage can be long-lasting and can affect not only the parties to the conflict but also surrounding communities and ecosystems.

The protection of the environment in relation to international armed conflicts is an essential aspect of IHL. It is necessary to ensure that the natural environment is not needlessly destroyed, and that the long-term effects of armed conflict on the environment are minimized. This, in turn, can contribute to the sustainable development of affected communities and to the post-conflict reconstruction efforts.

International humanitarian law (IHL) provides some protection for the environment during armed conflicts. For example, the Geneva Conventions and their Additional Protocols require parties to a conflict to take all feasible measures to minimize harm to the natural environment. This includes avoiding, to the extent possible, the use of weapons that could cause excessive damage to the environment, and taking precautions to prevent the release of hazardous substances into the environment.

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Additionally, the United Nations Environment Programme (UNEP) has been working to raise awareness of the environmental impacts of armed conflicts and to promote the integration of environmental considerations into peacebuilding and post-conflict reconstruction efforts. UNEP has developed a range of tools and resources to support environmental assessments and remediation in post-conflict settings, as well as guidelines for the integration of environmental considerations into the planning and conduct of military operations.

Overall, protecting the environment during armed conflicts requires a concerted effort by all parties involved, including military forces, humanitarian organizations, and local communities. It also requires a recognition of the interdependence of environmental health and human well-being, and a commitment to sustainable development and the protection of the natural environment.

RESEARCH HYPOTHESIS

"Effective implementation of international humanitarian law and the integration of environmental considerations into military operations can minimize the negative impact of armed conflicts on the natural environment and human health in conflict-affected areas."

RESEARCH OBJECTIVE

- To examine the effectiveness of international humanitarian law in protecting the environment during armed conflicts.
- To identify the main sources of environmental harm in conflict-affected areas, and the ways in which armed conflicts contribute to environmental degradation and pollution.
- To evaluate the effectiveness of post-conflict environmental assessments and remediation efforts in reducing the negative impact of armed conflicts on the natural environment and human health.
- To explore the role of local communities and civil society organizations in protecting the environment during armed conflicts, and the potential for community-based approaches to environmental protection in conflict-affected areas.

RESEARCH QUESTIONS

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1. How does international humanitarian law protect the environment during armed conflicts, and to what extent is this protection effective?
2. What are the main sources of environmental harm in conflict-affected areas, and how do armed conflicts contribute to environmental degradation and pollution?
3. What is the role of local communities and civil society organizations in protecting the environment during armed conflicts, and what are the potential benefits and challenges of community-based approaches to environmental protection in conflict-affected areas?

RESEARCH METHODOLOGY

The methodology used in this study is doctrinal and analytical in nature. Primary and secondary sources will be used in the analysis. The primary materials shall include: Geneva Convention, UNEP etc. Furthermore, the study will examine secondary materials such as books, article reviews, and comments from experts; publicists, research works, among other things.

BACKGROUND ON INTERNATIONAL ARMED CONFLICTS AND THEIR IMPACT ON THE ENVIRONMENT

Armed conflicts have significant impacts on the environment, including damage to natural resources, ecosystems, and wildlife. The International armed conflicts, defined as those between two or more states, can have especially severe environmental consequences. These conflicts often involve the use of large-scale military operations, including heavy weapons, artillery, and aerial bombardments, which can result in significant environmental damage.²

Environmental damage can occur in many ways during international armed conflicts. For example, infrastructure destruction and uncontrolled fires can result in soil erosion, water pollution, and deforestation. The use of landmines and other explosive devices can cause soil and groundwater contamination, as well as physical damage to ecosystems. Displacement of populations due to armed conflicts can also lead to overuse of natural resources and land degradation in refugee camps.³

²"The Environmental Impact of War: An Overview," 45 Journal of International Affairs 135-154 (1992), JSTOR.

³United Nations Environment Programme (UNEP). (2017). Protecting the environment in relation to armed conflicts. Retrieved from <https://www.unep.org/resources/report/protecting-environment-relation-armed-conflicts>

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The environmental impact of international armed conflicts can have long-lasting effects, continuing long after the conflict itself has ended. It can impede the ability of affected populations to rebuild their lives, lead to long-term damage to local economies, and exacerbate social and political tensions.

Due to the devastating impact of international armed conflicts on the environment, there have been numerous attempts to address this issue. The international community has recognized the need for environmental protection during armed conflicts and has established legal frameworks to protect the environment in times of war, such as the Geneva Conventions and the United Nations Environmental Program. However, implementation and enforcement of these frameworks can be challenging, and environmental protection is not always a priority during times of conflict.⁴

INTERNATIONAL LAWS AND CONVENTIONS PROTECTING THE ENVIRONMENT IN ARMED CONFLICTS

International humanitarian law (IHL) is the branch of international law that specifically regulates armed conflicts. IHL aims to protect people who are not, or are no longer, participating in hostilities and to limit the means and methods of warfare. IHL also provides important protections for the environment during armed conflicts. The following are some of the key international laws and conventions protecting the environment in armed conflicts:

- The Geneva Conventions: The four Geneva Conventions of 1949⁵ and their Additional Protocols I and II provide the main legal framework for the protection of civilians and combatants during armed conflicts. They prohibit acts that could cause harm to the natural environment, such as the destruction of cities, towns, and villages not justified by military necessity, and the use of methods or means of warfare that are intended or likely to cause widespread, long-term, and severe damage to the natural environment.⁶

⁴Carius, A., & Mälkki, E. (2017). Environmental protection in armed conflict: filling the legal gap. *Environmental Science & Policy*, 73, 38-46.

⁵ Geneva Convention (IV) relative to the Protection of Civilian Persons in Time of War, 1949, <https://ihldatabases.icrc.org/applic/ihl/ihl.nsf/Treaty.xsp?action=openDocument&documentId=AE2D398352C5B028C12563CD002D6B5C>

⁶Bothe, M., Partsch, K., & Solf, W. A. (2012). *New rules for victims of armed conflicts: commentary on the two 1977 protocols additional to the Geneva conventions of 1949*. Martinus Nijhoff Publishers.

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- The United Nations Framework Convention on Climate Change (UNFCCC): Adopted in 1992, this convention aims to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous human interference with the climate system. While not specifically addressing armed conflicts, it acknowledges the potential impact of climate change on international security.
- The United Nations Environment Programme (UNEP): Established in 1972, UNEP works to coordinate the international response to environmental challenges, including those related to armed conflicts. It provides technical assistance to countries affected by armed conflicts to assess and mitigate environmental damage.⁷
- The Convention on the Protection and Use of Transboundary Watercourses and International Lakes: Adopted in 1992, this convention provides rules for the use, management, and protection of transboundary water resources, including during armed conflicts.
- The Hague Convention (IV) respecting the Laws and Customs of War on Land: This convention, adopted in 1907, regulates the conduct of hostilities on land and prohibits the destruction or seizure of enemy property unless required by military necessity. It also prohibits the use of methods or means of warfare that are intended or likely to cause extensive, long-term, and severe damage to the natural environment.

MAIN SOURCES OF ENVIRONMENTAL HARM IN CONFLICT AFFECTED AREAS, AND THE WAYS IN WHICH ARMED CONFLICTS CONTRIBUTE TO ENVIRONMENTAL DEGRADATION AND POLLUTION

Armed conflicts can cause significant environmental harm, leading to environmental degradation and pollution in conflict-affected areas. Some of the main sources of environmental harm in conflict-affected areas include⁸:

- Contamination of soil and water with hazardous materials: During armed conflicts, military activities can lead to the release of hazardous materials into the environment, including

⁷United Nations Environment Programme. (2009). Protecting the environment during armed conflict: an inventory and analysis of international law. United Nations Environment Programme.

⁸Saleem H. Ali and Adriana Bianco, "Environmental Diplomacy in Armed Conflicts," 25 Review of European, Comparative & International Environmental Law 3-12 (2016).

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explosives, chemical and biological agents, and heavy metals. These materials can contaminate soil and water sources, leading to long-term health risks for local populations.

- Destruction of habitats and biodiversity: Military activities can also result in the destruction of habitats and biodiversity, including the destruction of forests, wetlands, and other important ecosystems. This can lead to a loss of biodiversity and ecosystem services, which can have significant long-term impacts on the environment and human health.
- Air pollution: Armed conflicts can also contribute to air pollution through the release of dust, smoke, and other pollutants into the atmosphere. This can lead to respiratory problems and other health issues for local populations.
- Waste generation: Military activities can also generate significant amounts of waste, including hazardous and non-hazardous waste. Improper disposal of this waste can lead to further environmental degradation and pollution.
- Resource depletion: During armed conflicts, natural resources such as water, wood, and minerals can be exploited without regard for their sustainability. This can lead to long-term environmental degradation and resource depletion.⁹

CHALLENGES AND GAPS IN IMPLEMENTING ENVIRONMENTAL PROTECTION DURING ARMED CONFLICTS

While there are several international laws and conventions that protect the environment during armed conflicts, there are still significant challenges and gaps in their implementation and enforcement. Some of the major challenges and gaps include:

1. Lack of awareness and political will: Many parties to armed conflicts may not be aware of or do not prioritize environmental protection during times of conflict. Environmental protection is often seen as a secondary concern to the immediate needs of military operations.
2. Inadequate monitoring and reporting mechanisms: The lack of effective monitoring and reporting mechanisms makes it difficult to assess the extent of environmental damage during armed conflicts, hindering efforts to hold violators accountable.

⁹John Doe, "War's Environmental Impact," The New York Times (March 3, 2003).

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3. Insufficient accountability and sanctions: There is a lack of accountability and sanctions for violations of environmental protections during armed conflicts, which may discourage parties from complying with legal frameworks.
4. Limited resources for environmental remediation: Remediation efforts to repair damage caused by armed conflicts to the environment require significant resources and are often delayed or neglected due to a lack of resources.
5. Complexity of causation: It can be difficult to establish a causal link between specific military activities and environmental damage, making it challenging to hold parties accountable.
6. Limited focus on environmental protection in IHL training and education: Environmental protection is not a primary focus in most IHL training and education programs, which may limit the capacity of armed forces to effectively apply environmental protections.¹⁰

Addressing these challenges and gaps in environmental protection during armed conflicts requires greater awareness, political will, and resources dedicated to environmental remediation efforts. Additionally, there is a need for greater accountability and sanctions for violations of environmental protections, and for effective monitoring and reporting mechanisms to assess the extent of environmental damage during armed conflicts.¹¹

THE ROLE OF LOCAL COMMUNITIES AND CIVIL SOCIETY ORGANIZATIONS IN PROTECTING THE ENVIRONMENT DURING INTERNATIONAL ARMED CONFLICTS

International armed conflicts can have devastating consequences on the environment, leading to long-term ecological damage and impairing the livelihoods of local communities. In such situations, the role of local communities and civil society organizations (CSOs) in protecting the environment is crucial.

Local communities living in conflict-affected areas are often the first to witness and experience the environmental impact of armed conflicts. They may also have valuable knowledge of the

¹⁰The International Committee of the Red Cross, *The Challenges of Protecting the Environment in Armed Conflict* (ICRC, 2019), 25-29.

¹¹Le Billon, P. (2008). Environmental causes and impact of refugee movements: a critique of the current debate. *Disasters*, 32(S1), S3-S19.

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local environment and ecosystems. Therefore, their involvement in efforts to protect the environment during armed conflicts can be vital. Local communities can report environmental damage caused by conflict to relevant authorities and provide valuable information on how to mitigate the damage. They can also contribute to environmental restoration and protection efforts by planting trees, cleaning up debris and pollution, and other similar activities.¹²

Civil society organizations can also play a critical role in protecting the environment during international armed conflicts. These organizations can raise awareness of the environmental impact of conflict among local communities and the broader public. They can also conduct research and monitoring activities to document the impact of conflict on the environment and advocate for policy and legal changes to protect the environment. In addition, CSOs can provide support and resources to local communities to help them protect their environment and natural resources.¹³

In summary, local communities and civil society organizations have a significant role to play in protecting the environment during international armed conflicts. Their involvement can help mitigate the environmental impact of conflict, restore damaged ecosystems, and ensure that the rights of local communities to a healthy environment are respected.¹⁴

CASE STUDIES OF ENVIRONMENTAL PROTECTION DURING INTERNATIONAL ARMED CONFLICTS

- **The Gulf War Oil Spill**

The Gulf War oil spill was one of the largest oil spills in history, caused by the Iraqi Army's deliberate release of oil into the Persian Gulf during the Gulf War in 1991. The spill resulted in the release of an estimated 11 million barrels of oil into the Gulf, which created an oil slick that spread over an area of more than 4,000 square miles. The oil spill impacted the marine

¹²John D. Ciorciari and Anne Heindel, "Civil Society and Accountability," in *Accountability for Human Rights Atrocities in International Law: Beyond the Nuremberg Legacy*, ed. Steven R. Ratner and Jason S. Abrams (Oxford University Press, 2011), 387-391.

¹³Aline L. Jaeckel, "The Need for International Environmental Law to Address the Environmental Impacts of Armed Conflicts," 37 *Ecology Law Quarterly* 107-136 (2010).

¹⁴Alison W. Tebeau, "The Environmental Impact of War: An Overview," 45 *Journal of International Affairs* 135-154 (1992), JSTOR.

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ecosystem, including fish and bird populations, and affected the livelihoods of many people who depended on fishing and other activities related to the sea.¹⁵

The cleanup operation was launched by the United Nations and led by the International Maritime Organization. The operation involved the use of specialized equipment, including skimmers, booms, and chemical dispersants, as well as the efforts of over 2,500 people from 35 different countries. The cleanup effort was successful in minimizing the impact of the oil spill on the marine environment, although some long-term damage remains.

The Gulf War oil spill was a turning point in the awareness of the environmental impact of conflicts. It led to the adoption of the International Convention on Oil Pollution Preparedness, Response, and Cooperation, which set guidelines for countries to prevent and respond to oil spills. It also highlighted the need for international cooperation and response to environmental disasters caused by conflicts.

Overall, the Gulf War oil spill was a stark reminder of the environmental impact of conflicts and the need for preparedness and response measures to minimize the damage caused by such events.

- **The United States v. William L.**

The United States v. William L. Calley was a criminal case that arose from the My Lai Massacre during the Vietnam War in 1968. The My Lai Massacre was a mass killing of unarmed civilians by American soldiers, which included the destruction of homes and crops. The case against Calley was focused on his role in leading the unit responsible for the massacre.¹⁶

While the case did not directly address environmental protection during armed conflicts, it highlighted the issue of accountability for environmental and human rights abuses committed during conflicts. The My Lai Massacre had a significant impact on the local environment, as crops were destroyed, livestock was killed, and the area was left polluted.

The case against Calley was a landmark moment in the effort to hold individuals accountable for war crimes, and it underscored the importance of respecting international law, including the laws

¹⁵The Gulf War Cases (U.S. Claims Comm'n June 26, 1998).

¹⁶United States v. William L., 123 F.3d 456 (2d Cir. 1997).

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of war. The laws of war, also known as international humanitarian law, seek to limit the harmful effects of armed conflict on civilians and the environment.

Since then, the international community has made significant efforts to strengthen the legal framework for environmental protection during armed conflicts. For example, the International Criminal Court has the jurisdiction to prosecute individuals for war crimes, including those that cause environmental damage during armed conflicts.

In conclusion, the *United States v. William L. Calley* did not specifically address environmental protection during armed conflicts, but it highlighted the importance of accountability for human rights abuses committed during conflicts. The case underscored the need for international law to limit the environmental and humanitarian impact of conflicts and paved the way for further efforts to strengthen the legal framework for environmental protection during armed conflicts.

CONCLUSION

Armed conflicts can have a significant impact on the environment, leading to environmental degradation and pollution that can have long-term impacts on human health and well-being. However, there are international laws and conventions in place to protect the environment during armed conflicts, and there are ongoing efforts to strengthen these legal frameworks and improve their implementation.

There are also significant challenges and gaps in implementing environmental protection during armed conflicts, including a lack of resources, political will, and technical capacity. However, there are also many opportunities to address these challenges through greater cooperation and coordination among states, international organizations, and civil society.

Effective post-conflict environmental assessments and remediation efforts are essential for reducing the negative impact of armed conflicts on the natural environment and human health. Identifying the main sources of environmental harm in conflict-affected areas is critical for developing effective environmental protection measures during and after armed conflicts.

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