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# Militarization, Climate Change, and Gendered Injustice: The Case of Gaza



النهضة العربية للديمقراطية والتنمية  
Arab Renaissance for Democracy & Development



مركز النهضة الاستراتيجي  
Renaissance Strategic Center

## Introduction

Militarization remains a major but often overlooked driver of environmental collapse. While civilian sectors are increasingly held accountable for carbon emissions, military operations, despite their immense environmental footprint, remain largely exempt from international climate agreements. This exemption allows cycles of resource extraction, violence, and ecological destruction to persist unchecked<sup>1</sup>. Nowhere is this intersection more visible than in Gaza, where Israeli military operations have compounded decades of environmental stress. In addition to the devastating humanitarian toll, the targeting of water systems, energy infrastructure, agricultural land, and marine ecosystems has created a severe and long-term ecological crisis.

The environmental toll of war in Gaza is stark. The bombardment of urban centres, the targeting of desalination and wastewater facilities, and the destruction of agricultural zones have created a multi-layered crisis. Contamination of air, water, and soil has become both a consequence and a weapon of conflict, undermining local ecosystems and compromising communities' ability to survive. These impacts reflect a broader global pattern: despite scientific evidence, the environmental consequences of warfare are systematically excluded from international climate reporting. Military emissions are often classified under national security, allowing governments to expand operations without environmental accountability.

This report argues that to advance meaningful climate justice, especially in conflict-affected regions like Gaza, **militarization must be addressed as a central driver of ecological breakdown. Without confronting the environmental costs of war, global climate efforts will remain incomplete and inconsistent.**

## The Case of Gaza: Environmental and Humanitarian Impact

Militarization extends far beyond the immediate destruction of infrastructure and lives; it also entails the systematic control and exploitation of natural resources, thereby intensifying environmental degradation and accelerating climate change. This dynamic is particularly evident in Gaza, where prolonged Israeli military operations have resulted in significant ecological disruption, altering landscapes and undermining the ecosystems that sustain Palestinian livelihoods (UNEP, 2021<sup>2</sup>).

Since October 2023, Israeli military operations, backed and sustained by extensive foreign military support, have unleashed a catastrophic assault that has already claimed the lives of more than 50,000 people. Those who will survive need to face the enduring consequences of environmental destruction, forced displacement, and the systematic dismantling of the conditions necessary for life. The devastation inflicted upon Gaza's ecosystems, infrastructure, and public health is not incidental; it is an intrinsic feature of a military strategy designed to dominate, displace, and eliminate. Massive aerial bombardments, the systematic targeting of water systems, farmland, and urban infrastructure, and the deliberate degradation of the environment amount to ecological warfare, compounding the humanitarian catastrophe.

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<sup>1</sup> In 1997, military emissions were left out of the GHG-targeting Kyoto Protocol – and they were exempted again when the Paris Agreement was struck in 2015 on the grounds that energy use data could threaten armed forces' security.

<sup>2</sup> UNEP. (2021). Environmental Impact of the Conflict in Gaza: Preliminary Assessment. Retrieved from: <https://www.unep.org/resources/report/environmental-impact-conflict-gaza-preliminary-assessment-environmental-impacts>

Israeli forces have conducted more than 1,400 airstrikes in December 2024 alone<sup>3</sup>. Based on a study, the estimation of total emissions from direct war activities in the first 120 days of the conflict ranges between 420,000 and 650,000 metric tons of CO<sub>2</sub> equivalent<sup>4</sup>, with daily emissions from military activity exceeding 5,000 metric tons. These figures do not include longer-term emissions from reconstruction efforts, environmental degradation, and infrastructure loss.

When combining direct military-related emissions (approximately 4.74 million metric tons CO<sub>2</sub>) with indirect emissions from bombing and rubble processing (approximately 741,000 metric tons CO<sub>2</sub>), **Gaza's environmental cost from 15 months of war reaches an estimated 5.48 million metric tons CO<sub>2</sub>e**. To frame this in stark terms: converting the fossil fuel energy represented by these emissions into equivalent energy yields suggests an impact comparable to detonating roughly **638 Hiroshima-scale nuclear bombs**<sup>5</sup>. **The bombings in Gaza have produced millions of metric tons of CO<sub>2</sub> emissions, widespread infrastructure collapse, and lasting ecosystem degradation, underscoring the profound impact of sustained aerial warfare.**

The environmental degradation is compounded by the destruction of Gaza's water and sanitation infrastructure, which has become a deliberate extension of military control<sup>6</sup>. Already suffering from extreme water scarcity, Gaza's population now faces near-total water insecurity: over 97% of the water supply is contaminated (B'Tselem, 2022<sup>7</sup>) and unfit for human consumption (WHO, 2022<sup>8</sup>). Israeli military airstrikes have systematically targeted desalination plants, water pipelines, and wastewater treatment facilities (Al-Haq, 2023<sup>9</sup>) (UNRWA, 2023<sup>10</sup>). The shutdown of critical infrastructure has led to the daily discharge of over 130,000 cubic meters of untreated sewage into the Mediterranean Sea<sup>11</sup>, contaminating local agriculture and fisheries. This destruction not only creates an immediate public

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<sup>3</sup> <https://www.nationofchange.org/2025/01/03/israel-launched-over-1400-airstrikes-on-gaza-in-december-as-us-continues-to-provide-billions-in-military-aid/>

<sup>4</sup> Neimark, Benjamin, and Patrick Bigger. "New Study Reveals Substantial Carbon Emissions from the Ongoing Israel-Gaza Conflict." Phys.org, June 7, 2024. <https://phys.org/news/2024-06-reveals-substantial-carbon-emissions-ongoing.html>

<sup>5</sup> This comparison, while useful for illustrating the sheer scale of destruction, must be understood within the fundamental differences between nuclear and conventional warfare. A single nuclear bomb, such as the one dropped on Hiroshima, releases an explosive yield of approximately 15 kilotons of TNT (63,000 gigajoules of energy), generating an intense blast wave, extreme heat, and lethal radiation, all of which lead to indiscriminate destruction over a vast radius. In contrast, conventional airstrikes rely on high-explosive munitions that, while devastating, cause localized damage and require thousands of sorties to achieve similar levels of structural annihilation. Unlike nuclear weapons, which introduce long-term radioactive contamination and the potential for nuclear winter, conventional bombing results in severe but non-radioactive environmental consequences, including air and water pollution, habitat destruction, and large-scale debris accumulation.

<sup>6</sup> Oxfam International. "How Israel has Weaponised Water in its Military Campaign in Gaza." July 2024. <https://www.oxfam.org/en/press-releases/how-israel-has-weaponised-water-in-its-military-campaign-in-gaza>.

<sup>7</sup> B'Tselem. (2022). Thirsty for a Solution: The Water Crisis in the Occupied Territories and Israel's Responsibility. Retrieved from: [https://www.btselem.org/sites/default/files2/thirsty\\_for\\_a\\_solution.pdf](https://www.btselem.org/sites/default/files2/thirsty_for_a_solution.pdf)

<sup>8</sup> WHO. (2022). Risk of Disease Spread Soars in Gaza as Health Facilities, Water and Sanitation Systems Disrupted. Retrieved from: <https://www.emro.who.int/media/news/risk-of-disease-spread-soars-in-gaza-as-health-facilities-water-and-sanitation-systems-disrupted.html>

<sup>9</sup> Al-Haq. (2023). By Targeting Water, Sanitation and Hygiene Infrastructure, Israel is Forcing Mass Displacement in Gaza. Retrieved from: <https://www.alhaq.org/advocacy/18466.html>

<sup>10</sup> UNRWA. (2023). UNRWA Situation Report #126 on the Situation in the Gaza Strip and West Bank, Including East Jerusalem. Retrieved from: <https://www.unrwa.org/resources/reports/unrwa-situation-report-126-situation-gaza-strip-and-west-bank-including-east-jerusalem>

<sup>11</sup> United Nations Environment Programme. Environmental Impact of the Conflict in Gaza: Preliminary Assessment of Environmental Impacts. Nairobi, 2024. <http://wedocs.unep.org/20.500.11822/45739>



health crisis but forces reliance on energy-intensive desalination and international aid, deepening environmental vulnerability and economic dependency.

Extensive bombardment has led to significant destruction of Gaza's farmland and ecosystems. More than two-thirds of Gaza's agricultural areas, including wells and greenhouses, have been damaged or destroyed by bombardment and military earthworks ([Yale Environment 360](#)). The loss of biodiversity and damage to marine life due to overfishing restrictions and debris pollution further undermine food security and climate resilience. The use of **explosive weapons** has released hazardous substances into the environment, including heavy metals and toxic gases, while the conflict has generated an estimated 39 million tonnes of debris, equating to over 100 kg per square meter in the Gaza Strip. This poses long-term risks to soil, water, and air quality, dismantling the very systems that enable people to adapt to climate pressures. ([UNEP.ORG](#))

Militarization does not just destroy resources—it reshapes landscapes and enforces environmental control as a weapon of domination. The deliberate burning of Palestinian olive groves by settlers, the construction of separation walls that fragment ecosystems, and the diversion of natural water flows all serve to reengineer the environment to the benefit of the occupier while systematically marginalizing the indigenous population (Human Rights Watch, 2022<sup>12</sup>). These actions have direct consequences for climate resilience, as deforestation, soil degradation, and water mismanagement amplify the vulnerabilities of Palestinian communities to climate change.

In a global context, the military-industrial complex is one of the most significant but least discussed drivers of climate change. The case of Gaza exemplifies how militarization accelerates environmental breakdown—not only through the direct emissions of war but also through long-term resource depletion, pollution, and systemic ecological collapse (Scientific American, 2023<sup>13</sup>). Addressing climate change without confronting militarization means ignoring one of the primary engines of environmental destruction. If the international community is serious about climate justice, it must recognize the climate-military nexus and demand accountability for the environmental crimes perpetrated under the guise of security and occupation.

Climate change is not only a casualty of militarization but also a driver of it. Scholars of environmental security, such as Homer-Dixon (1999)<sup>14</sup>, argue that resource scarcity and ecological stress contribute directly to social unrest, displacement, and armed conflict. As climate-induced droughts, food shortages, and water crises escalate, states increasingly turn to military solutions rather than sustainable policy interventions. In Gaza, where environmental degradation is compounded by occupation, climate hardships serve as a pretext for intensified militarization and repression. This cyclical dynamic—where climate stress fosters instability, which is then met with military force—ensures that both human suffering and ecological devastation persist. The displacement of Palestinian communities, destruction of agricultural land, and forced dependence on external aid exemplify how militarization transforms climate vulnerabilities into instruments of control (UNEP, 2023<sup>15</sup>). Breaking this

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<sup>12</sup> Human Rights Watch. (2022). Extermination and Acts of Genocide: Israel Deliberately Depriving Palestinians in Gaza of Water. Retrieved from: <https://www.hrw.org/report/2024/12/19/extermination-and-acts-genocide/israel-deliberately-depriving-palestinians-gaza>

<sup>13</sup> Scientific American. (2023). Warfare's Climate Emissions Are Huge but Uncounted. Retrieved from: <https://www.scientificamerican.com/article/warfares-climate-emissions-are-huge-but-uncounted/>

<sup>14</sup> Homer-Dixon, Thomas F. Environment, Scarcity, and Violence. Princeton, NJ: Princeton University Press, 1999. <https://www.jstor.org/stable/j.ctt7pgg0>

<sup>15</sup> UNEP. (2023). Rising Together Against the Impacts of Climate Change at COP28. Retrieved from: <https://www.unep.org/news-and-stories/speech/rising-together-against-impacts-climate-change-cop28>

cycle requires integrating environmental justice into peacebuilding efforts, rather than reinforcing militarized responses to ecological crises.

## Gendered Impacts: A Women, Peace, and Security Perspective

The consequences of militarization and environmental destruction in Gaza are deeply gendered. As in many conflict zones, women bear the brunt of the compounded crises produced by war, occupation, and ecological collapse. In Gaza, where more than 50,000 lives have been lost, war and blockade have devastated infrastructure, leaving women at heightened risk of sexual and gender-based violence (GBV), forced displacement, and maternal health emergencies (UN Women, 2023<sup>16</sup>). Hospitals and clinics, already critically weakened by the long-standing blockade, have been rendered non-functional or destroyed, leaving pregnant women without access to critical care. Shortages of clean water, electricity, and basic medical supplies further endanger maternal and reproductive health.

The collapse of Gaza's healthcare system, combined with mass displacement, has made survival increasingly precarious for women and girls. Overcrowded shelters, disrupted protective services, and the breakdown of community networks have increased their exposure to violence, exploitation, and forced labor. The destruction of water infrastructure, contamination of agricultural land, and collapse of food systems deepen these vulnerabilities, creating intersecting risks that cut across every aspect of daily life. The long-term impact is also intergenerational. The interruption of education for girls, the breakdown of family structures, and the loss of economic opportunities threaten to trap entire communities in cycles of poverty and dependence. Yet, despite these challenges, Palestinian women continue to play critical roles in sustaining social and ecological resilience. Across Gaza, women lead initiatives in sustainable agriculture, community-based water management, and environmental rebuilding—demonstrating the essential role of feminist leadership in crisis recovery (Al Jazeera, 2023<sup>17</sup>).

These forms of leadership are grounded in feminist security studies, which challenge traditional notions of security defined by military power and instead emphasize health, social cohesion, and ecological sustainability (Cohn, 2013<sup>18</sup>). Women in militarized zones face unique barriers: limited mobility, unequal access to resources, and the constant threat of violence. These barriers must be addressed not as peripheral concerns, but as central to peacebuilding and environmental recovery (UNEP, 2023). Applying a WPS lens to Gaza reveals that real security does not stem from military dominance but from sustainable, community-driven solutions that prioritize gender equity, environmental sustainability, and peacebuilding. Feminist climate justice demands an anti-militarist stance, challenging the entrenched systems that view security through the lens of weapons and war rather than human welfare. **Addressing the gendered impacts of conflict requires demilitarization, investment in climate resilience, and the inclusion of women as key decision-makers in peacebuilding efforts**, ensuring that future solutions foster not only political stability but also long-term ecological and social well-being.

## Global Inconsistencies: The Climate-military Hypocrisy

Despite their commitments to climate action and sustainability, major global powers continue to invest heavily in militarization, arms sales, and war economies - undermining the very environmental goals they claim to champion. This contradiction—between green rhetoric and militarized practice—is not

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<sup>16</sup> UN Women. (2023). Gendered Impacts of Armed Conflict in Gaza. Retrieved from: <https://www.unwomen.org>

<sup>17</sup> Al Jazeera. (2023). Palestinian Women Leading Sustainability Efforts in Gaza. Retrieved from: <https://www.aljazeera.com>

<sup>18</sup> Cohn, Carol. (2013). Women and Wars: Contested Histories, Uncertain Futures. Cambridge: Polity Press.

incidental. It is structurally embedded within global systems of governance that prioritize security and economic dominance over genuine ecological survival.

Actor such as the United States, the European Union, and Israel have positioned themselves as leaders in global climate negotiations, advocating for carbon reduction, renewable energy, and environmental protection. Yet, at the same time, these same actors pour billions into large-scale military operations, weapons production, and defence industries that remain exempt from environmental accountability frameworks they impose on civilian sectors. Under the Paris Accord and most national climate plans, military emissions are either omitted entirely or reported under vague and non-binding categories of national security clauses, leaving substantial portions of their environmental impact unmeasured and unregulated.

This selective approach to climate accountability reflects what political theorist Timothy Luke (1997)<sup>19</sup> describes as *eco-governmentality*: the use of environmental governance not to dismantle systems of power but to reinforce them. Under eco-governmentality, sustainability policies are deployed to maintain geopolitical dominance, managing the symptoms of ecological collapse without addressing its militarized, colonial roots.

In Gaza, the results of these policies are tangible. The invisibility of military emissions in international frameworks enables continued environmental harm without consequence, weakening the credibility of global climate action. Thus, **addressing climate change without confronting militarization is a profound act of denial**. The international community cannot continue to exclude military emissions and war economies from climate agreements while claiming leadership on sustainability. True climate action requires acknowledging and dismantling the military-industrial complex as a primary engine of environmental destruction—and holding those who fund, arm, and enable militarized violence accountable for its environmental crimes.

Recent debates within international law and environmental justice movements have increasingly recognized **ecocide** — the massive destruction of ecosystems — **as a potential fifth international crime**, alongside genocide, crimes against humanity, war crimes, and crimes of aggression. In the context of Gaza, the deliberate targeting of water infrastructures, farmlands, marine ecosystems, and food systems has prompted calls for accountability based on these emerging frameworks. Scholars such as Abuawad et al. (2024)<sup>20</sup> argue that the environmental devastation witnessed in Gaza constitutes a form of ecocide intertwined with genocidal practices, necessitating urgent recognition and accountability within international forums.

Recognizing ecocide as a distinct crime would establish legal responsibility for large-scale environmental destruction, especially when it systematically targets the conditions necessary for survival. It would also reinforce the indivisibility of environmental justice and human rights in conflict settings.

In this context, Palestinian resilience must be understood not through the distorted lens of counterterrorism narratives but as part of a broader decolonial and anti-colonial struggle for survival. As Frantz Fanon (1963<sup>21</sup>) theorized, resistance is a necessary and inevitable response to systemic violence. Movements such as Boycott, Divestment, Sanctions (BDS) have linked the Palestinian cause

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<sup>19</sup> Luke, Timothy W. "Environmentality as Green Governmentality, Eco-Knowledge And Enviro-Discipline As Tactics Of Normalisation." In *Discourses of the Environment*, edited by Eric Darier, 121–151. Oxford: Blackwell, 1999. <https://www.wiley.com/en-ae/Discourses+of+the+Environment-p-9780631211228>

<sup>20</sup> Abuawad, A., et al. (2024). *From Ecocide to Genocide: A Call to Action for Scientists Globally to Address the Destruction in Gaza*. SSRN.

<sup>21</sup> Fanon, Frantz. (1963). *The Wretched of the Earth*. New York: Grove Press.

to Indigenous land struggles, Black Lives Matter, and global climate justice efforts, underscoring the interconnectedness of anti-colonial and environmental struggles. The destruction of olive groves, the contamination of Gaza's waters, and the systemic degradation of ecosystems reflect colonial strategies of domination that seek to sever people from their land.

The case of Gaza illustrates the urgent need for a more coherent and accountable climate governance framework—one that recognizes the environmental toll of militarization and enforces consistent standards regardless of geopolitical context. As current policies fall short in addressing these intersecting crises, there is a clear imperative to translate analysis into action. The following recommendations outline practical steps that states, international organizations, and civil society actors can take to integrate environmental justice, peacebuilding, and demilitarization into climate policy.

## Policy Recommendations

True climate action and environmental justice cannot be achieved without confronting militarization, dismantling systems of colonial domination, and centering decolonial and feminist frameworks in policymaking. The following recommendations are offered to states, international organizations, climate movements, and civil society actors committed to environmental and human rights:

### 1. Integrate Military Emissions into Climate Frameworks

- Require the full disclosure and inclusion of military emissions in national greenhouse gas inventories under the UNFCCC.
- Establish binding limits on military-related carbon emissions in climate agreements.

### 2. Condition Military Aid on Human Rights and Environmental Standards

- Suspend military funding and arms sales to states perpetrating environmental destruction and human rights violations, including Israel.

### 3. Strengthen Legal Accountability for Environmental Destruction

- Prosecute environmental destruction as a war crime under existing international law.
- Support the recognition of ecocide as a standalone international crime.

### 4. Support Decolonial and Indigenous-Led Climate Justice Movements

- Recognize and support Palestinian environmental and land sovereignty efforts as part of broader decolonial climate justice.

### 5. Demilitarize Climate Finance and Humanitarian Aid

- Redirect funding from military budgets to environmental restoration, sustainable agriculture, healthcare, and renewable energy in conflict-affected areas.
- Ensure that climate finance mechanisms do not reinforce militarized structures of control or occupation.

### 6. Center Women and Feminist Movements in Peacebuilding and Environmental Recovery

- Prioritize the participation of women in all peacebuilding, humanitarian, and environmental reconstruction efforts.
- Apply the Women, Peace, and Security (WPS) framework systematically, integrating gender justice into environmental security policies.

These recommendations call for a fundamental rethinking of security: one that prioritizes life over arms, environmental regeneration over extraction, and self-determination over domination. Without systemic change, climate action will remain complicit in sustaining the very structures that drive ecological collapse and human suffering.

## Conclusion: Toward Climate Justice and Demilitarization

The environmental collapse of Gaza reveals, with devastating clarity, the intersection of militarization, settler-colonial violence, and ecological destruction. Far from being peripheral issues, militarism and occupation are central drivers of climate breakdown, biodiversity loss, and human suffering. Gaza is not an isolated tragedy; it is a harbinger of what happens when security is defined by domination and extraction rather than by life, dignity, and sustainability. The complicity of global powers—who arm, fund, and diplomatically shield environmental destruction while proclaiming climate leadership—must be confronted. True climate justice cannot coexist with systems that depend on military power, economic exploitation, and colonial control. Addressing environmental collapse demands not only reducing emissions but dismantling the war economies, settler projects, and militarized borders that reproduce inequality and ecological devastation.

**Palestinian resilience, indigenous land stewardship, and feminist climate advocacy offer valuable insights for shaping a more just and sustainable future.** Advancing equitable access to land and water, restoring ecosystems, and centering marginalized communities are not only acts of political liberation—they are acts of environmental survival. **Climate justice is decolonization. Climate justice is demilitarization.** Without confronting these intertwined systems of oppression, efforts to save the planet will remain hollow, partial, and complicit.

The choice is clear: the future must be built on solidarity, sovereignty, and the defence of life against systems of death. **There is no environmental justice without political liberation, and no sustainable future without the dismantling of militarized violence.**



