



Displaced Palestinians near the sea in Deir al-Balah, June 20, 2024. (Abed Rahim Khatib/Flash90)

## The Toxic Archive: Gaza's "Post-War" Waste and the Politics of Disposal

### 1. Introduction: Gaza's Environmental Invisibility

In the wake of the 2023–2024 “war” on Gaza, the public and policy focus has understandably prioritised immediate humanitarian needs: food, shelter, electricity, and water. However, an equally pressing—though less visible—dimension of the catastrophe is the environmental wreckage left in the “war’s” aftermath. The destruction of homes, roads, infrastructure, and agricultural land has generated millions of tonnes of waste, some of it chemically toxic, some radioactive, some biologic from animal and human corpses, and nearly all of it without a designated system of safe disposal.

Gaza, which already lacked basic environmental infrastructure before the “war,” is now teetering on the brink of ecological collapse. According to Buheji and Al-Muhannadi (2023), the Strip has experienced a total disruption of its waste management capabilities. With sewage networks, water treatment facilities, and landfills destroyed or deemed non-functional, there are no existing systems capable of handling the volume or toxicity of the rubble now saturating the landscape.

Despite the scale of environmental devastation, reconstruction plans—whether from regional powers, donors, or international organisations—rarely include provisions for environmental recovery. In fact, environmental management is almost entirely omitted from major frameworks—as previously introduced in our latest bulletin—in the Gaza Recovery and Reconstruction Plan (GRRP) and the Arab Proposal for Gaza (2025). This omission is not accidental, in contradiction, it reflects a broader trend in “post-war” reconstruction, where ecology is treated as apolitical, technocratic, and secondary to infrastructure and economic recovery.

This erasure has consequences. When environmental restoration is excluded, toxic legacies persist, and the most vulnerable—especially women, children, and agricultural workers—are exposed to disproportionate risk. The silence around Gaza’s environmental trauma also obscures legal accountability. Under international humanitarian and environmental law, deliberate or negligent destruction of ecosystems during warfare may constitute a violation of the ENMOD Convention (1977) or even environmental war crimes. Yet without assessment, oversight, or monitoring, these potential violations remain unexamined.





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## 2. Gaza's Rubble Crisis: Scale, Composition, and Risk

As of early 2025, Gaza is estimated to contain over 23 million tonnes of rubble, spanning residential neighbourhoods, roadways, agricultural fields, and hospital grounds (Amane, Dardona, & Dardona, 2025). This includes not only inert materials like concrete and brick, but also asbestos, lead, plastic combustion by-products, depleted uranium remnants, and other hazardous materials known to cause cancer, respiratory failure, and birth defects (Gunawan, 2024).

Hazardous waste presents a particularly urgent concern. Buheji and Al-Muhannadi (2023) estimate that hundreds of thousands of tonnes of rubble contain toxic or industrial contaminants, including materials from bombed industrial sites, healthcare facilities, and electrical grids. These materials are often dumped near civilian areas, exposing communities to particulate inhalation and groundwater contamination. Children are particularly vulnerable, with respiratory illness rates skyrocketing in the wake of the bombings.

Making matters worse, Gaza has no operational debris recycling plant, in addition to limited access to heavy machinery needed for safe removal. Since 2021, the Israeli occupying state has tightly controlled the import of bulldozers, concrete crushers, and heavy-duty trucks under dual-use security restrictions (UNRWA, 2025). This policy blocks not only weapons but also equipment essential for "post-war" cleanup and environmental remediation.

The result is chaotic: waste is piled in ad hoc landfills, scattered along roadways, or burned in open spaces. This creates airborne pollution and unregulated leaching of chemicals into the soil. Public health outcomes are deteriorating rapidly, and the medical system—already gutted by "plausible acts of genocide" (ICJ 2024)—is unable to cope with the surge in environmentally linked illness. This toxic legacy constitutes a slow, hidden extension of warfare.

## 3. Dumping in the Sea: Reclamation or Erasure?

Perhaps the most alarming environmental development is the proposal to dump war debris into the sea as part of a "land reclamation" effort. The Arab Proposal for Gaza (2025) outlines plans to dispose of over 10 million cubic metres of rubble along Gaza's coastline to "reclaim land and support new infrastructure." While framed as a pragmatic engineering solution, this move threatens to devastate Gaza's marine ecosystems and livelihoods tied to fishing.

The environmental risks of sea dumping are substantial. According to Gunawan (2024), chemically contaminated rubble may introduce "extensive damage, including soil degradation, air pollution, water contamination, biodiversity loss, and significant health impacts." Meaning that toxins, if marine contamination spreads, can accumulate in fish, bio-magnify up the chain, and render the coastal waters uninhabitable, leaving Gaza's fishing sector—which employs thousands and provides a rare source of protein—at a risk of total collapse.

Moreover, no public environmental impact assessment (EIA) has been released to evaluate the consequences of this approach. International law is clear: Article I of the ENMOD Convention prohibits environmental modification techniques with widespread, long-lasting, or severe effects (Walters & O'Sullivan, 2016). Dumping toxic debris into a fragile coastal zone arguably falls under this definition, yet no accountability mechanisms are being enforced.

From a political perspective, sea dumping also symbolises something more troubling: the erasure of Gaza's natural landscape under the guise of development. If coastal rubble entombs ruins and bodies beneath artificial terrain, it may hinder future war crime investigations and symbolically erase the lived geography of trauma. As one Gazan fisherman remarked, "When the sea turns grey and the fish die, so too does the memory of the coastline" (Amane et al., 2025).

### Sewage discharge in the Mediterranean Sea

25 June 2024



2 August 2024



Source: Planet Labs PBC



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## 4. Who Controls the Rubble? Sovereignty Through Waste

At the heart of Gaza's waste crisis lies a critical question: who has the right, and capacity, to decide how debris is managed and where it goes? Under occupation, Palestinians have limited access to borders, materials, and international institutions. This extends to environmental control as the Israeli occupying state forces its control in denying the entry of rubble-processing equipment, chemical testing kits, and clean-up materials, citing national security (UNRWA, 2025).

Palestinian municipalities are thus left as the default actors responsible for clearing millions of tonnes of hazardous debris with no protective equipment, insufficient personnel, and no legal mandate. These municipal bodies, already struggling under unviable conditions and fuel shortages, are tasked with performing emergency ecological triage under siege conditions. This situation has been extending from before the siege up to this moment.

This vacuum of environmental governance has serious implications for accountability and sovereignty. Many of the areas with concentrated rubble are also zones of intensive bombing, potentially containing the remains of victims or sites of war crimes under investigation. The unregulated clearing or dumping of these sites risks the erasure of forensic evidence.

Ultimately, environmental control is not apolitical. As Walters and O'Sullivan (2016) argue, waste is a domain through which spatial domination and state violence are exercised. In Gaza, the question of who removes the rubble, and where they put it, has become a battleground over territory, legitimacy, and memory.

## Conclusion: From Ecological Neglect to Environmental Justice

In conclusion, Gaza's reconstruction must not be addressed solely through brick and mortar. As the land itself is wounded from its soil, to its air, and its coast. The "post-war" waste is toxic, politically charged, and embedded in questions of historical accountability. Ignoring the ecological dimension of recovery eventually reproduces structural violence through neglect and abandonment.

The politics of waste in Gaza intersect with the right to live, the right to memory, the right to a healthy environment; and a newly revisited highlight of the Palestinian Cause: the right to return. Nevertheless, when reconstruction plans omit environmental science and public consultation, they risk accelerating slow forms of spatial erasure, and dumping rubble into the sea is emblematic of this dynamic, burying both material and memory.

A just future for Gaza must include ecological restoration. This means recognising environmental damage as a legitimate object of reparation, mobilising international law and scientific expertise, and insisting that sovereignty includes the right to clean air, safe land, and a living sea.



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