

# THIS WEEK IN Palestine



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■ **The Day After -  
Open Issue on Gaza I**



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# Destroyed Ecosystems

## The Impact of Israeli Military Activities on the Environment



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The effects of armed conflict in Palestine, since the establishment of the State of Israel in 1948, are devastating and long-lasting. The post-conflict impact of the ongoing attacks against the Gaza Strip and the West Bank has yet to be investigated. In reviewing the data on these effects two things become apparent: While there is enough data to show that the impacts are catastrophic (called an environmental *Nakba* by many), more data needs to be collected, which is sometimes difficult (given the siege and ongoing genocide in the Gaza Strip), to assess the full extent.

Israel was founded with the idea of transforming/changing the landscape and society of Palestine, an area that is part of the Fertile Crescent, rich in human and biological diversity. Even before 1948 and the founding of the “Jewish” state, colonial settlement activities ravaged the landscape<sup>i</sup> and society.<sup>ii</sup> Over the past 76 years, Israel has replaced Palestinians and natural areas with urbanization and industries (including industrial agriculture), built residential colonies on hilltops, and implemented a matrix of control that includes bypass roads and walls to hem in the remaining Palestinians. In the occupied West Bank, Israel has established 151 colonial settlements, 150 settlement outposts, 210 military bases, and 144 restricted

sites, all of which damage the environment in various ways, not least of which is the release of untreated wastewater on Palestinian farmland.<sup>iii</sup>

The Israeli military industrial complex produces high levels of greenhouse gas emissions that impact the local environment and global climate change, generating more greenhouse emissions than the population of the West Bank and Gaza combined.<sup>iv</sup> While this was true before the October 7, 2023 attack on Gaza, the first 100 days of Israeli sorties and bombing have produced more greenhouse gases than many developing countries

and ecosystems, including in the Wadi Gaza protected area.<sup>vii</sup>

Israeli military activities to ensure hegemony and suppress any form of Palestinian resistance have ramifications not only on the remaining Indigenous people but also on the local and regional environment. Even before the ongoing assault, military training sites throughout the West Bank have produced damage and left large amounts of lead and other heavy metals that contaminate the soil and water and negatively impact biodiversity.<sup>viii</sup> Military firing zones in many cases overlap with so-called

The genocidal destruction of Gaza.



produce annually.<sup>v</sup> Other pollution from military activities include nitrates, phosphates, trichloroethane, and heavy metals. Moreover, Israel has developed nuclear facilities that have created an estimated 80 nuclear weapons,<sup>vi</sup> and these activities and the resulting nuclear waste clearly impact the environment. Israeli bulldozers, tanks, and armored personnel vehicles intentionally damaged the fragile soils

nature reserves, and both are intended to exclude the local Palestinians who are forced to leave or are regularly harassed by the shooting at their communities. This is especially the case in many areas in the Jordan Valley and in the South Hebron Hills. Firing Zone 918, for example, damages the livelihood of people in Masafer Yatta.<sup>ix</sup> In addition, firing zones in the West Bank affect wildlife such as

wolves, gazelles, hyenas, and other species that are scared away by the shelling and shooting. This has a severe impact on the biodiversity and the environment. The activities of Israeli industrial sites illegally constructed in the occupied territories also produce pollution that impacts the health of the local population.<sup>x</sup>

Another area of concern is the annexation of water sources in the West Bank by Israeli forces, which disrupts the contiguity of the natural water flow of streams and springs and affects the local flora and fauna. A 1967 military order gave Israel exclusive authority over all water sources in the West Bank, including control over rainwater harvesting.<sup>xi</sup> Israel uses the water for military and colonial settlement activities and controls the use of water by Palestinians living in the West Bank.<sup>xii</sup> The Gaza Strip has been denied its water, as Israel blocked the water that used to flow to Wadi Gaza from the Hebron Hills.<sup>xiii</sup> Even before the latest conflict, 95 percent of the Gaza Strip's water was undrinkable.

Another way in which the environment is negatively impacted is through Israel's use of fences, walls, and other barriers around Palestinian communities that steal land and keep Palestinians segregated and their movements controlled. The apartheid wall has caused extensive damage and changes to the land and endangered animal species. Many local animals have been prevented from their normal movement patterns, often being trapped by electric fences. The wall has reduced the availability of food to many larger species, such as the hyena.<sup>xiv</sup>

The movement restrictions imposed on the Palestinian people have made it difficult or impossible for them to protect major wildlife areas.<sup>xv</sup>

**Research must investigate the full extent of the damage that the occupation is inflicting on the environment in Palestine. But gathering the necessary data remains a challenge while conflict and occupation limit access and create danger throughout the West Bank and Gaza.**

Aside from the wall's damaging ecological footprint, fertile Palestinian lands behind the wall are no longer accessible to Palestinians. During construction of the wall, many trees were uprooted, which has led to negative impacts on the hydrology of watersheds and shifted the water flow, leading to further erosion of the land.

The impact of the Israeli attack on Gaza has had worse effects on the environment in just three months than the multiyear bombing of German cities during WWII.<sup>xvi</sup> Israel's use of ordnance that contain depleted uranium, high impact explosives, and incendiary bombs including white phosphorus leaves significant environmental degradation and impacts soil, air, and water.<sup>xvii</sup> The debris of 62,000 residential buildings, thousands of other buildings, and solid waste accumulated over the duration of the attack has created a major issue for safe disposal. The environmental damage to Gaza from

the dropped ordnance was huge and may be irreversible. Moreover, extensive noise pollution has had negative physiological effects not only on the people of Gaza but also on the submarine life and marine mammals in the area.

Most of the water and wastewater services have been damaged in the ongoing attacks against Gaza, causing a steep rise in pollution and in the depletion of groundwater sources. All wastewater treatment facilities have been closed or damaged since October 2023 and, as a result, 130,000 cubic meters of sewage has leaked into the Mediterranean Sea. The human waste and dead bodies have already caused

species live along the coastal areas, and the inflicted damage is causing significant ecosystem damage.

Last but not least, there will be tremendous post-conflict damage and long-term effects on the environment. But this applies not only to Gaza. There are many unexploded ordnance left from training exercises and past conflicts, and an unknown number of landmines are scattered all over environmentally critical areas such as the Jordan Valley. Some of the impacted aspects post conflict include air pollution, coastal pollution, increased risk of forest fires, and altered natural landscapes, along with the spread of human disease



Munition left in the area of Masafer Yatta.

the spread of disease among hundreds of thousands of people according to the World Health Organization. Israel is also pumping seawater into resistance tunnels which will pollute the underground water aquifer with salt and cause many areas above it to collapse. Soil erosion is highly damaging to the environment around urban infrastructure and can impact biodiversity in the agricultural fields of the Gaza Strip. Many endangered

(hepatitis A and leishmaniasis, in particular) not only in Gaza but also in crowded prisons and in marginalized communities in the West Bank.

International humanitarian and environmental laws specifically prohibit the activities and damage that Israel is inflicting on the occupied territories as cited above. The Fourth Geneva Convention, for example, stipulates that a military occupation

must be temporary and that the occupying belligerent state must safeguard the lives, livelihoods, and natural resources, among others, that belong to the people of the area it occupies. The state of Israel has made no effort to follow international law to safeguard the environment and has furthermore violated international law through the segregation wall and settlements. More studies are needed to expose the resulting humanitarian and environmental damage, and the recent war on Gaza is a case study of illegality and environmental catastrophe. There is a need to highlight the environmental and human health impacts in public discourse, and remedial actions and projects must be implemented.

The status of the Palestinian environment, like the state of Palestine in general, is catastrophic under colonialism. Every passing day makes reconciliation, rehabilitation, and remediation more difficult. It is incumbent on all people of good will, those who genuinely seek a sustainable future, to intensify the

effort to end the decades of apartheid and colonization. This will have a positive impact not merely on the lives and livelihoods of all people in this area but also on all living organisms and well beyond. As noted from the hundreds of thousands who took to the streets to protest the ongoing assault and demand a ceasefire, Palestine is a global issue. What has received less attention is that war and conflict are also a climate change issue. A sustainable planet requires the end of colonization.

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<sup>i</sup> Alon Tal, *Pollution in a Promised Land: An Environmental History of Israel*, Berkeley, CA: University of California Press, 2002.

<sup>ii</sup> Ilan Pappé, *The Ethnic Cleansing of Palestine*, Oxford: Oneworld, 2006.

<sup>iii</sup> "Demonstrating the harmful effects caused through the illegal Israeli settlement practice of dumping wastewater onto Palestinian agricultural lands," Applied Research Institute Jerusalem, ARIJ, January 28, 2014; also see Mazin Qumsiyeh, "Database of Environmental Impact of Israeli Occupation," Land Research Center, 2023.

<sup>iv</sup> Hanan A. Jafar, Isam Shahrouh, and Hussein Mroueh, 2023, "Evaluation of Greenhouse Gas Emissions in Conflict Areas: Application to Palestine," *Sustainability*, 15(13), p. 10585.

<sup>v</sup> "Emissions from Israel's War in Gaza Have 'Immense' Effect on Climate Catastrophe," *Guardian*, January 9, 2024.

<sup>vi</sup> Julian Borger, "The Truth about Israel's Nuclear Arsenal," *Guardian*, January 15, 2014; see also Drew Christiansen, "It is Time for Israel to Come Clean About Its Nuclear Weapons," *America-Jesuit Review*, January 14, 2022; and Victor Gilinsky, "The US Silence on Israeli Nuclear Weapons and the Right-Wing Israeli Government," *Bulletin of the Atomic Scientists*, May 4, 2023.

<sup>vii</sup> Z. Brophy and Jad Isaac, "The environmental impact of Israeli military activities in the occupied Palestinian territory," Bethlehem: Applied Research Institute-Jerusalem, 2009.

<sup>viii</sup> *Ibid.*

<sup>ix</sup> "Update on Petition Regarding Firing Zone 918," Association of Civil Rights in Israel, January 12, 2017.



<sup>x</sup> Nadia Khlaif and Mazin Qumsiyeh, "Genotoxicity of Recycling Electronic Waste in Idhna, Hebron District, Palestine," *International Journal of Environmental Studies* 74(1), 2017, pp. 66–74.

<sup>xi</sup> Jad Isaac, "The Essentials of Sustainable Water Resource Management in Israel and Palestine," *Arab Studies Quarterly*, 22(2), 2000.

<sup>xii</sup> "Demand Dignity: Troubled Waters – Palestinians Denied Fair Access to Water," Amnesty International (AI), October 27, 2009; and "The Occupation of Water," AI, November 29, 2017.

<sup>xiii</sup> "oPt: Water Crisis in Gaza – A Report Denounces Israeli Responsibilities," Relief Web, October 9, 2008.

<sup>xiv</sup> Duaa Husein and Mazin Qumsiyeh, "Impact of the Israeli Segregation and Annexation Wall on Palestinian Biodiversity," *Africana Studia*, 37: 19–26, 2022.

<sup>xv</sup> Mazin B. Qumsiyeh and Issa Mousa Albaradeiya, "Politics, Power, and the Environment in Palestine," *Africana Studia* 37, 2022, pp. 9–18.

<sup>xvi</sup> Mazin Qumsiyeh, "Impact of Israeli Military Activities in the Palestinian Environment," *International Journal of Environmental Studies*, forthcoming.

<sup>xvii</sup> *Ibid.*