

Allegations of Depleted Uranium Use in Gaza

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Palestine's permanent representative to the IAEA, Saleh Abdel Shafi, has called for an investigation into Israel's potential use of depleted uranium (DU) in Gaza.¹ The New Arab has also reported accusations against Israel for using shells with depleted uranium in Gaza.²

In an interview with Al Jazeera, Saleh Abdel Shafi highlighted Israel's alleged use of depleted uranium in Gaza and the nuclear threats posed by Israeli ministers.³ He criticized the International Atomic Energy Agency (IAEA) for not escalating these issues with the Israeli government, underscoring the urgency and gravity of the situation. While Shafi's suspicion of DU weapon use by the Israeli military is warranted given the weapons and platforms available, ICBUW observes that there is no conclusive evidence to support these claims.

The controversy surrounding the use of these weapons during conflicts in the Middle East has, in the past, prompted several investigations and reports. These studies examined the environmental effects of the war and whether depleted uranium or even enriched uranium was employed by the Israeli military, in particular during the 2006 Lebanon war and subsequent conflicts in Gaza.

Mazin B. Qumsiyeh's research from the Palestine Institute for Biodiversity and Sustainability highlights the extensive environmental damage resulting from Israeli military activities in Gaza.⁴ The impacts span from pre-conflict preparations, such as military bases and training sites, to the direct destruction during conflicts, including habitat alteration and toxic pollution from munitions, possibly by DU munition. Post-conflict remnants, like unexploded ordnance and

¹Article - Palestine Envoy Calls for IAEA Investigation into Israel's Use of Depleted Uranium in Gaza

²Article - The long-term environmental toll of Israel's assault on Gaza

³Article - Palestine IAEA rep: Israel not international community's 'darling' any more

⁴Mazin B. Qumsiyeh, *Impact of the Israeli military activities on the environment*, International Journal of Environmental Studies, 2024

contaminated water sources, contribute to long-term environmental degradation. The 2023 conflict alone saw the deployment of over 89,000 tons of explosives, resulting in the devastation of residential and natural areas, further compounding the region's ecological crisis. Qumsiyeh also notes DU as one possibility of toxic war materials, but cites no sources, just an unreferenced statement and links to health studies not specific to the Gaza region. This research underscores the need for comprehensive environmental studies and remedial actions in protracted conflict zones like Gaza.

Busby et al. found in their 2006 study titled "Evidence of Enriched Uranium in Guided Weapons Employed by the Israeli Military in Lebanon in July 2006", a high amount of total uranium and an enrichment signature in a single sample from a bomb crater in Khiam, Lebanon.⁵ They proposed two possible scenarios: the weapon might have been a novel small experimental nuclear fission device or a conventional uranium penetrator using enriched uranium. They favored the latter explanation, as a fission device would have resulted in higher levels of radioactivity in the area. They suggested that the uranium used in the ammunition likely originated from nuclear reactor waste, which they think to be cheaper, than tungsten ammunition with similar penetration characteristics. In a paper earlier this year⁶, Busby et al. tried to underline their 2006 findings by evaluating another paper which analysed 55 samples from the Gaza region for their U238/U235 isotope ratio. This paper attempts to discuss that the lower than usual uranium isotope ratios in Gaza could be an indication that some kind of nuclear weapon using enriched uranium has been used in the Gaza region.

ICBUW has a critical standpoint towards the findings of Busby et al. as measuring DU or uranium quantities of a single sample in the first paper is not enough. One should always also look into the military, or combat, and the weaponry, especially the platform, situation. That means checking whether it was (militarily) necessary to fight hardened targets, i.e. tanks, and whether DU capable platforms were around. Busby fails to consider leaks from Israel's nuclear bomb factory at Dimona as possible sources of the reported enriched uranium samples. Secondly, his work is not replicated and is full of speculative and conditional statements about imaginary sources. Additionally, the presence of DU would probably have encouraged Lebanon and Hamas to disclose proper evidence, which has not happened to date. To ensure reliable results, studies on the use of DU weapons should be conducted by a team of independent scientists, and their findings should be accountable and transparent. DU use in weapons and its release into the environment is also a public health issue. All in all, it is more important to have facts on which to base interventions than to remain, as has often been the case, at the stage of deduction or intuition.

Nonetheless it should be noted that the Israeli military does have DU ammunition capable weapon platforms, such as the Merkava tank⁷ series which can use M774 105mm APFSDS-T rounds with DU or the AH-64 Apache⁸ helicopters which are capable of firing DU consisting PGU-14/B API ammunition from a M230 automatic gun mounted on the Apache helicopter.⁹ But it is not clear whether DU ammunition has really been fired so far and whether there has been a military scenario making it necessary to do so.

The BLU-109 bunker buster bombs (designed to penetrate reinforced concrete and underground

⁵C. Busby, D. Williams, 2006. *Evidence of Enriched Uranium in Guided Weapons Employed by the Israeli Military in Lebanon in July 2006*: Preliminary Note. Occasional paper, 6.

⁶Busby, *Anomalous Enriched Uranium in environmental samples from Gaza*, ResearchGate, 2024

⁷[Article - Israeli army unveils new 'dual-use' tank](#)

⁸[Article - US Warms to Israel's Apache Helicopter Request After Initial Denial](#)

⁹Liolios, *Assessing the risk from the depleted Uranium weapons used in Operation Allied Force.*, Department of Theoretical Physics at the University of Thessaloniki, 1999

structures such as tunnels) are referenced in the context of the Gaza war. No evidence has ever been presented to support claims of DU in conventional bunker busters, and the allegation has been compounded by years of misinformation and disinformation. Nevertheless, there are some sources cited that presume DU hardening for the bunker busters, such as the physics professor Katsuma Yagasaki¹⁰ or a Guardian article¹¹, which repeats without question that the bunker busters contain as much as 7 tonnes of DU. However, the website globalsecurity.org emphasizes that a metal alloy is used for hardening instead of DU.¹² After more than 25 years during which no reliable forensic nor documentary evidence comparable to that for known DU weapons (including DU production licenses, weapon contracts and test documentation) has been shown to support claims of DU use in U.S. penetrating conventional warheads ('bunker busters'), ICBUW believes that continued claims to the contrary are counterproductive to the campaign to ban uranium weapons.

From a general perspective, the devastating impact of war transcends the specifics of the weaponry used. The general atrocities of war, encompassing destruction, loss of life, and the profound psychological trauma inflicted on survivors, is sufficiently horrific on their own. While depleted uranium (DU) weapons have specific, pernicious effects, the broader scope of war's devastation on communities and environments is equally alarming. The toll on civilian populations, the disruption of societies, and the annihilation of infrastructure collectively underscore the inherent horrors of armed conflict. Emphasizing the general devastation wrought by war can serve as a powerful reminder. In the case of this still ongoing terrible war in Gaza rulings of International Courts have indicated a great amount of international (humanitarian) law violations already evident - to be condemned and prosecuted.

ICBUW urges the cessation of embedding barbaric weapons such as DU ammunition, and will continue to closely monitor the respective situation in Gaza and insists on peaceful resolutions and the prevention of future armed conflicts.

ICBUW - Intern, 03.09.2024

¹⁰Yagasaki, [Depleted Uranium Shells, The Radioactive Weapons - Perpetuation of War Damage by Radiation](#), 2003

¹¹[Article - Gulf troops face tests for cancer](#)

¹²[Article - BLU-109 / I-2000 / HAVE VOID](#)