

Depleted uranium time for a ban?



Doug Weir

Coordinator

International Coalition to Ban Uranium Weapons

BAN **URANIUM** **WEAPONS**

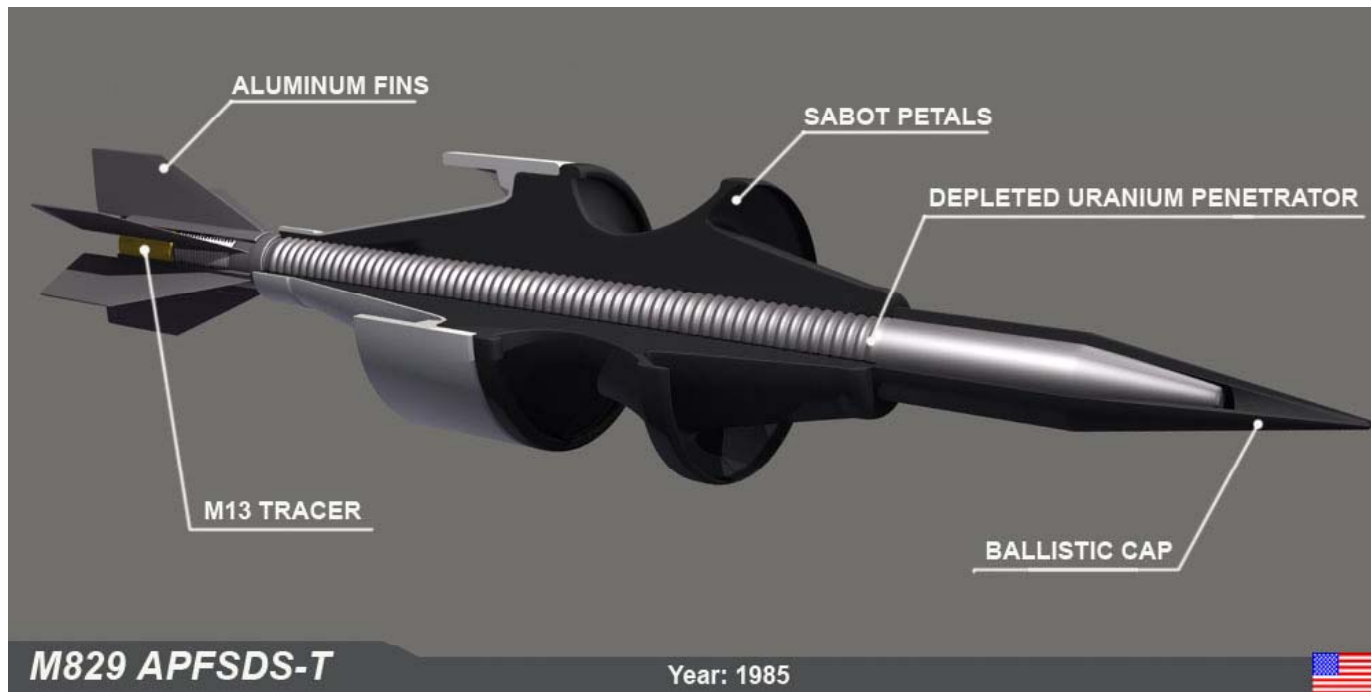


INTERNATIONAL COALITION TO BAN URANIUM WEAPONS - ICBUW

Launched in 2003. Based in Manchester, UK.

Campaigns for a ban on the use of uranium in all conventional weapons and weapon systems and for monitoring, health care, compensation and environmental remediation for communities affected by their use.

Membership includes 160 groups in 33 countries worldwide.



DENSE: 18.9 g/cc

PYROPHORIC: particles spontaneously burn in air

KINETIC ENERGY PENETRATORS: use kinetic energy instead of chemical explosive to pierce armour (armour piercing incendiary).

PLATFORMS: aircraft, tanks, armoured fighting vehicles.

USERS: Six manufacture, ~20 stockpile.

KEY ISSUES: HEALTH RISKS: *“people living or working in affected areas may inhale re-suspended contaminated dusts”, “Particular emphasis should be placed on the protection of children.” WHO.*

Consistent reports of increases in cancer and birth defects in areas where the weapons have been used.

To date no sufficiently robust and focused studies have been undertaken into the long-term health of civilian populations.

Studies are difficult to undertake in post-conflict settings, particularly when there is no access to targeting data, health records and detailed environmental measurements.

DU contamination is persistent, particles can remain unaltered and hazardous for at least 30 years.

KEY ISSUES: DU IS A CARCINOGEN: when internalised, alpha radiation emitting radionuclides are Group 1 Carcinogens: IARC.

Historic risk assessments on DU's effect focused on the radiological risk of lung cancer and the chemical effects of DU on the kidney.

Peer-review research published over the last decade has analysed DU's impact on DNA.

Overall the studies have confirmed that DU is genotoxic and a carcinogen.

We do not know how much people are being exposed and some groups are more vulnerable than others.

KEY ISSUES: USE AGAINST NON ARMoured TARGETS: buildings and civilian infrastructure to non-armoured vehicles and unmounted troops.

DU is promoted for use solely against armoured vehicles.

Evidence from the Balkans and Iraq shows that it has been used against a range of targets, from buildings and civilian infrastructure to non-armoured vehicles and unmounted troops.

Use against non-armoured targets can increase the likelihood of civilian exposure, both during and after conflict.

DU's incendiary nature may result in indiscriminate damage or cause cruel or inhumane injuries.

KEY ISSUES: USE IN POPULATED AREAS: civilian exposure risks increased by use in areas where people live work and play.

DU was originally developed for Cold War battlefields.

Since then it has been used in densely populated areas, particularly in Iraq. This has increased the risk that civilians will be exposed to DU.

"These munitions are incendiary in nature. Accordingly, they may cause fires which spread thereby causing potential risks of disproportionate injury to civilians or damage to civilian objects. Precautions to avoid or minimize such risks shall be taken in the use of this weapon or alternate available weapons should be used." **USAF legal review for PGU-14B 30mm ammunition.**

KEY ISSUES: USER TRANSPARENCY: accurate data required for effective marking, risk awareness and clean-up but users have been reluctant to release.

UN resolutions on DU call for transparency from DU users over where the weapons have been fired and in what quantities. Users argue that only they should decide on when and how such data should be shared.

Transparency is crucial for the effective post-conflict management of DU and in reducing the risks it poses to civilians.

DU may be difficult to identify without specialist equipment and awareness of DU has historically been low among deminers.

KEY ISSUES: MANAGEMENT: scrap, soils: significant technical, logistical and financial burden.

Decades on from the 1991 Gulf War, an effective long-term waste management strategy has yet to be implemented for contaminated military wreckage and soils in Iraq.

Other affected states: a lack of hazardous waste storage facilities, technical and analytical expertise, financial costs and logistical challenge for states. No obligations for assistance.

Lack of effective DU management increases the risk of civilian exposure.

KEY ISSUES: PSYCHOSOCIAL IMPACT: *“radiation fear linked to the presence of depleted uranium residues further increases the anxiety of the population”, IAEA.*

In common with other radiation incidents, the known or suspected presence of DU in communities can have a significant psychosocial impact on civilians.

Can continue even after sites have been remediated by the authorities.

Effective risk communication difficult without transparency and comprehensive environmental assessment. Particularly challenging in highly politicised post-conflict settings.

KEY ISSUES: RESPONDING TO UNCERTAINTY: When would be a good time to ban DU?

DU users simple narrative: exposure risks generalised, limited data considered, civilian health concerns trivialised, lack of real world data.

The behaviour of DU in the environment is highly variable. But the use of DU has a predictable legacy.

Uncertainty used by vested interests to justify regulatory inaction.

DU problems cannot be resolved through regulating their use. They need to be banned.

KEY ISSUES: RESPONDING TO UNCERTAINTY: When would be a good time to ban DU?

“Facilities and activities that give rise to radiation risks must yield an overall societal benefit,” IAEA

“The [UK] Government considers that the unnecessary introduction of radioactivity into the environment is undesirable, even at levels where the doses to both human and non-human species are low and, on the basis of current knowledge, are unlikely to cause harm,” UK radioactive waste management strategy.

“...if no one makes a case for the effectiveness of DU on the battlefield, DU rounds may become politically unacceptable and thus, be deleted from the arsenal.” Los Alamos Laboratory, 1991.

IRAQ'S DU LEGACY:

DU USE: 1991 and 2003, minimum 400,000kg.

PROBLEMS: lack of transparency, lack of technical capacity, huge volume of contaminated military scrap and soils and scrap metal trade.

NUMBER OF KNOWN SITES: 300-350.

COST OF DECONTAMINATION: US\$30-45m (estimated).

New MoE, UNEP, UNDP and WHO strategy: "...develop solid and hazardous waste management and assess the pollution of former military manufacturing sites and conflict zones, especially the remnants of weapons contaminated with depleted uranium."

Unclear whether sufficient capacity is available to implement the plan effectively.

Iraqi tribal leaders, medical professionals and parliamentarians have all called for transparency, clean-up and health support.

EMERGING GLOBAL CONSENSUS: ACCEPTABILITY? is it acceptable to disperse large quantities of a chemically toxic and radioactive heavy metal, which is widely recognised as hazardous, in conventional warfare?

NATIONAL BANS: DU weapons have been banned by Belgium and Costa Rica.

REGIONAL PARLIAMENTS: Parlatino and European Parliament have called for moratoria, EP has called for common EU position on a ban (2014).

Tarja Cronberg MEP, Greens/EFA group:

"We want: that the issue is recognised institutionally as a problem we have to address.

"Secondly, that High Representative for EU Foreign Affairs and Security Policy will initiate a process leading to an EU common position banning the use, the production and investments in DU ammunition by EU member states."



EMERGING GLOBAL CONSENSUS:

UN GENERAL ASSEMBLY RESOLUTIONS:

2007: **136**-6-36: recognised potential risks.

2008: **141**-4-34, called for updated research from UN agencies.

2010: **148**-4-30, called for user transparency.

2012: **155**-4-27, called for precautionary approach to use.

Next resolution due in 2014.

Non-binding but: “...could eventually lead to the codification in treaty law of norms protecting both human health and the environment from depleted uranium armaments, thus addressing the current major gap in treaty law regarding the use of such weapons.” UNEP (2009).

NEXT STEPS: HOW TO DEAL WITH A PROBLEM LIKE DEPLETED URANIUM?

WE COULD TACKLE THE SYMPTOM:

- Ban DU weapons with a treaty like landmines and cluster bombs,
- Develop obligations for clearance,
- Improve assistance to affected States and communities?

OR TRY AND CURE THE DISEASE:

- Apply the lessons and tackle the root causes:
- Examine State responsibility for the environmental legacy of conflict,
- Address use of toxic substances in conventional weapons and military policies and practices that generate conflict pollutants,
- Develop obligations for post-conflict environmental assessment,
- Develop obligations for civilian health monitoring and hazard awareness,
- Develop new norms for post-conflict environmental assistance and cooperation.

TOXIC REMNANTS OF WAR AND CONFLICT AND THE ENVIRONMENT

Toxic Remnants of War Project launched by ICBUW and PAX in April 2012. www.toxicremnantsofwar.info @detoxconflict

Explore the extent of civilian harm from environmental damage resulting from conflict and military activities;

Examine whether existing legal protection is adequate;

Consider whether merging humanitarian and environmental principles could improve civilian and environmental protection.

**Toxic Remnants of War
Network** established 2014.



Article36



PAX



FINLAND AND DEPLETED URANIUM: UN SECRETARY GENERAL REPORT 2008

1. Finland **shares the concerns** raised in the General Assembly about the potential risk related to the use of depleted uranium in armaments and ammunitions.
2. Finland **does not possess** any ammunition containing depleted uranium.
3. The exposure of Finnish peacekeepers to depleted uranium has been **scientifically examined**.
4. Awareness of issues related to **depleted uranium is included in the training** of all Finnish peacekeepers.
5. An **active dialogue** between civic society, non-governmental organizations, the scientific community and civil military authorities continues nationally. Finland **greatly values** international efforts to discuss the potential risks of the use of depleted uranium in armaments and ammunitions.

SUBMIT updated report on the effects of the use of armaments and ammunition containing depleted uranium to the UN Secretary General.

RAISE DU concerns in a statement at the First Committee in October.

SUPPORT the resolution *'effects of the use of armaments and ammunitions containing depleted uranium'* at this October's First Committee.

FURTHER READING

Thank you, to learn more on these topics:

www.icbuw.org/publications Twitter: @ICBUW

International Coalition to Ban Uranium Weapons

Precaution in Practice:

a guide to the acceptability of depleted uranium weapons



Responsibility:

uranium weapons in



of the utility of penetrators

ICBUW

radioactive properties, depleted uranium (DU), primarily as kinetic energy weapons. defend this choice by stating that its ability to penetrate materials.

weapons, but in the past this debate has generally focused on the effects of DU, rather than the military utility of DU. The purpose of this report is to critically assess and to give recommendations on the acceptability of DU weapons containing DU.

this advantage can also be gained through other means. Thus, greater emphasis should be placed on the acceptability of DU.

ing armour?
penetrator material is that it combines high strength with an 'adiabatic shear'. While other penetrator materials of comparable density to DU, they exhibit different properties.

out the effectiveness of DU and information that is more difficult to access. However, internal UK documents show a 5% increase in performance. A US government document states that DU penetration is above that of the tungsten alloys.

ngsten alloys, or indeed modern types of armour, are more effective and conclude that on a strict material-to-material basis, DU is more effective than tungsten. However, it is noted that at some stage by new compounds. A 2009 report by the Research Laboratory identified nanocrystalline tungsten as a promising material in key areas.

ic energy rounds
which determine the effectiveness of a kinetic energy penetrator, it is quite possible to achieve similar results.

use the effectiveness of armour piercing rounds include the dimensions and shape of the penetrator. Reducing the weight or other performance-improving changes to the sabot can increase velocity, as can modifications to the barrel or improvements to the explosive charge.

ICBUW - Overturning the Case: an analysis of the utility of depleted uranium in kinetic energy penetrators www.banpdx.org.uk

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